=> d his ful

(FILE 'HOME' ENTERED AT 10:31:06 ON 31 AUG 2006)

FILE 'REGISTRY' ENTERED AT 10:32:46 ON 31 AUG 2006
L1 3 SEA ABB=ON PLU=ON VETWFLRHP|IETWFLRHP|RETWFLRHP|VESWFLRNP/SQSP

FILE 'CAPLUS' ENTERED AT 10:34:23 ON 31 AUG 2006 L2 2 SEA ABB=ON PLU=ON L1

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=> fil reg
FILE 'REGISTRY' ENTERED AT 10:35:17 ON 31 AUG 2006
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                          30 AUG 2006 HIGHEST RN 905475-39-0
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                          30 AUG 2006 HIGHEST RN 905475-39-0
DICTIONARY FILE UPDATES:
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on property searching in REGISTRY, refer to:
http://www.cas.org/ONLINE/UG/regprops.html
=> d que 11
              3 SEA FILE=REGISTRY ABB=ON PLU=ON VETWFLRHP|IETWFLRHP|RETWFLRHP
                |VESWFLRNP/SQSP
=> d sqide3 l1 1-3
     ANSWER 1 OF 3 REGISTRY COPYRIGHT 2006 ACS on STN
L1
     849707-86-4 REGISTRY
RN
     L-Proline, L-seryl-L-valyl-L-alanyl-L-leucyl-L-valyl-L-prolyl-L-histidyl-L-
     valylqlycyl-L-methionylqlycyl-L-leucyl-L-α-glutamyl-L-threonyl-L-
     arginyl-L-threonyl-L-α-glutamyl-L-threonyl-L-tryptophyl-L-methionyl-
     L-seryl-L-seryl-L-α-qlutamylqlycyl-L-alanyl-L-tryptophyl-L-lysyl-L-
     histidyl-L-valyl-L-qlutaminyl-L-arginyl-L-isoleucyl-L-α-glutamyl-L-
     threonyl-L-tryptophyl-L-phenylalanyl-L-leucyl-L-arginyl-L-histidyl- (9CI)
     (CA INDEX NAME)
OTHER NAMES:
     46: PN: US20050080231 FIGURE: 6 claimed sequence
     PROTEIN SEQUENCE
FS
SQL 40
PATENT ANNOTATIONS (PNTE):
Sequence | Patent
Source
         Reference
=======+============
Not Given | US2005080231
          claimed
         FIGURE 6
SEQ3
         1 Ser-Val-Ala-Leu-Val-Pro-His-Val-Gly-Met-
        11 Gly-Leu-Glu-Thr-Arg-Thr-Glu-Thr-Trp-Met-
        21 Ser-Ser-Glu-Gly-Ala-Trp-Lys-His-Val-Gln-
```

```
31 Arg-Ile-Glu-Thr-Trp-Phe-Leu-Arg-His-Pro
               --- --- --- --- --- --- ---
HITS AT:
           32-40
MF
     Unspecified
CI
     MAN
SR
     CA
LC
     STN Files:
                  CA, CAPLUS, TOXCENTER, USPATFULL
DT.CA CAplus document type: Patent
       Roles from patents: BIOL (Biological study); PRP (Properties)
               1 REFERENCES IN FILE CA (1907 TO DATE)
               1 REFERENCES IN FILE CAPLUS (1907 TO DATE)
     ANSWER 2 OF 3 REGISTRY COPYRIGHT 2006 ACS on STN
Ll
RN
     819099-23-5 REGISTRY
CN
     L-Proline, L-leucyl-L-alanyl-L-methionyl-L-α-glutamyl-L-α-
     glutamyl-L-leucyl-L-tyrosyl-L-arginyl-L-seryl-L-valyl-L-alanyl-L-leucyl-L-
     valyl-L-prolyl-L-histidyl-L-valylglycyl-L-methionylglycyl-L-leucyl-L-
     \alpha-glutamyl-L-threonyl-L-arginyl-L-threonyl-L-\alpha-glutamyl-L-
     threonyl-L-tryptophyl-L-methionyl-L-seryl-L-seryl-L-α-glutamylglycyl-
     L-alanyl-L-tryptophyl-L-lysyl-L-histidyl-L-valyl-L-glutaminyl-L-arginyl-L-
     isoleucyl-L-α-glutamyl-L-threonyl-L-tryptophyl-L-phenylalanyl-L-
     leucyl-L-arginyl-L-histidyl- (9CI)
                                         (CA INDEX NAME)
OTHER NAMES:
CN
     34: PN: US20040266987 SEQID: 35 unclaimed protein
FS
     PROTEIN SEQUENCE
SQL 48
PATENT ANNOTATIONS (PNTE):
Sequence | Patent
         Reference
Source
======+==========
Not Given US2004266987
          unclaimed
         SEQID 35
SEQ3
         1 Leu-Ala-Met-Glu-Glu-Leu-Tyr-Arg-Ser-Val-
        11 Ala-Leu-Val-Pro-His-Val-Gly-Met-Gly-Leu-
        21 Glu-Thr-Arg-Thr-Glu-Thr-Trp-Met-Ser-Ser-
        31 Glu-Gly-Ala-Trp-Lys-His-Val-Gln-Arg-Ile-
        41 Glu-Thr-Trp-Phe-Leu-Arg-His-Pro
           --- --- --- --- --- ---
HITS AT:
           40-48
MF
     Unspecified
CI
     MAN
SR
     STN Files:
LC
                  CA, CAPLUS, TOXCENTER, USPATFULL
DT.CA
      CAplus document type: Patent
      Roles from patents: PRP (Properties)

1 REFERENCES IN FILE CA (1907 TO DATE)
               1 REFERENCES IN FILE CAPLUS (1907 TO DATE)
     ANSWER 3 OF 3 REGISTRY COPYRIGHT 2006 ACS on STN
L1
RN
    819099-19-9 REGISTRY
     L-Proline, L-seryl-L-valyl-L-alanyl-L-leucyl-L-valyl-L-prolyl-L-histidyl-L-
     valylglycyl-L-methionylglycyl-L-leucyl-L-α-glutamyl-L-threonyl-L-
     arginyl-L-threonyl-L-\alpha-glutamyl-L-threonyl-L-tryptophyl-L-methionyl-
```

 $\texttt{L-seryl-L-seryl-L-alanyl-L-tryptophyl-L-lysyl-L-alanyl-L-tryptophyl-L-lysyl-L-alanyl-L-tryptophyl-L-lysyl-L-alanyl-L-tryptophyl-L-lysyl-L-alanyl-L-tryptophyl-L-lysyl-L-alanyl-L-tryptophyl-L-lysyl-L-alanyl-L-tryptophyl-L-alanyl-L-al$ histidyl-L-glutaminyl-L-arginyl-L-isoleucyl-L-α-glutamyl-L-threonyl-L-tryptophyl-L-phenylalanyl-L-leucyl-L-arginyl-L-histidyl- (9CI) (CA INDEX NAME) OTHER NAMES: 29: PN: US20040266987 SEQID: 29 unclaimed protein PROTEIN SEQUENCE FS SOL 39 PATENT ANNOTATIONS (PNTE): Sequence | Patent Reference Source Not Given US2004266987 unclaimed SEQID 29 1 Ser-Val-Ala-Leu-Val-Pro-His-Val-Gly-Met-SEQ3 11 Gly-Leu-Glu-Thr-Arg-Thr-Glu-Thr-Trp-Met-21 Ser-Ser-Glu-Gly-Ala-Trp-Lys-His-Gln-Arg-

31 Ile-Glu-Thr-Trp-Phe-Leu-Arg-His-Pro === === === === === === === 31-39 HITS AT: MF Unspecified CI MAN SR CA, CAPLUS, TOXCENTER, USPATFULL LС STN Files: DT.CA CAplus document type: Patent Roles from patents: PRP (Properties) 1 REFERENCES IN FILE CA (1907 TO DATE)

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http://www.cas.org/infopolicy.html 'OBI' IS DEFAULT SEARCH FIELD FOR 'CAPLUS' FILE => d gue 12 3 SEA FILE=REGISTRY ABB=ON PLU=ON VETWFLRHP|IETWFLRHP|RETWFLRHP L1VESWFLRNP/SQSP 2 SEA FILE=CAPLUS ABB=ON PLU=ON L1 1.2 => d .ca 12 1-3 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN L_2 ACCESSION NUMBER: 2005:325740 CAPLUS DOCUMENT NUMBER: 142:385982 Small peptides having apoptotic activities and their TITLE: applications Despres, Philippe; Catteau, Adeline INVENTOR(S): PATENT ASSIGNEE(S): Institut Pasteur, Fr. U.S. Pat. Appl. Publ., 43 pp., Cont.-in-part of U.S. SOURCE: Ser. No. 311,213. CODEN: USXXCO DOCUMENT TYPE: Patent LANGUAGE: English FAMILY ACC. NUM. COUNT: 2 PATENT INFORMATION: PATENT NO. KIND DATE APPLICATION NO. DATE ______ ---------______ US 2005080231 US 2003-608147 A1 20050414 20030630 A2 20011220 WO 2001-IB1570 20010618 WO 2001096376 WO 2001096376 A3 20030313 WO 2001096376 C2 20031023 AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NÈ, SN, TD, TG 20040527 US 2003-311213 US 2004101862 A1 20030519 US 2004049016 A1 20040311 US 2003-634895 20030806 PRIORITY APPLN. INFO.: US 2000-212129P P 20000616 WO 2001-IB1570 W 20010618 US 2003-311213 A2 20030519 US 2001-881710 A3 20010618 OTHER SOURCE(S): MARPAT 142:385982 Entered STN: 15 Apr 2005 The present invention relates to nine residue peptides (M32-40) from flavivirus M ectodomain able to modulate specifically the apoptotic activity of diverse flavivirus, to pharmaceutical composition comprising the same and their use for the treatment and/or the prevention of flavivirus-linked infections and cancers. Dengue virus M ectodomain peptide fusion protein containing the M precursor translocation signal sequence induced apoptosis in mouse neuroblastoma Neuro 2a and human hepatoma HepG2 cancer cells. ICM C07K007-08 ICICS C07K007-06

INCL 530329000; 530330000 CC 1-6 (Pharmacology)

+rapr

Section cross-reference(s): 10 849707-84-2 849707-85-3 849707-86-4 ITRL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study) (M protein fragment, apoptosis induction in relation to; small apoptotic peptides from flavivirus M ectodomain for treating and preventing flavivirus-linked infections and cancers) ANSWER 2 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN 2005:2227 CAPLUS ACCESSION NUMBER: DOCUMENT NUMBER: 142:86611 Attenuated flavivirus strains containing a mutated TITLE: M-ectodomain and their applications Despres, Philippe; Catteau, Adeline INVENTOR (S): Institut Pasteur, Fr. PATENT ASSIGNEE(S): U.S. Pat. Appl. Publ., 30 pp. SOURCE: CODEN: USXXCO Patent DOCUMENT TYPE: English LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION: APPLICATION NO. KIND DATE PATENT NO. ----------_ _ _ _ _____ 20041230 US 2003-608029 20030630 A1 US 2004266987 US 2003-608029 20030630 PRIORITY APPLN. INFO.: Entered STN: 31 Dec 2004 The present invention relates to nine residue peptides (ApoptoM) from AB flavivirus M ectodomain able to modulate specifically the apoptotic activity of diverse flavivirus, to pharmaceutical composition comprising the same and their use for the treatment and/or the prevention of flavivirus-linked infections and cancers. ICM C12Q001-70
ICS A61K039-12; A61K039-193; C07K002-00; C07K004-00; C07K005-00; IC C07K007-00; C07K014-00; C07K016-00; C07K017-00; A61K038-00; C07K001-00 INCL 530300000; 530350000; 424204100; 424218100 1-5 (Pharmacology) Section cross-reference(s): 6, 10 819099-13-3 819099-14-4 819099-15-5 **819099-19-9** 819099-23-5 RL: PRP (Properties) (unclaimed protein sequence; attenuated flavivirus strains containing a

mutated M-ectodomain and their applications)

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	E E3+ALL	
L1	1995 SEA ABB=ON PLU=ON DENGUE/OBI	
L2	19 SEA ABB=ON PLU=ON (M/OBI (L) ECTODOMAIN/OBI OR ECTO	
	DOMAIN/OBI)	
L3	51 SEA ABB=ON PLU=ON (M (3A) ECTODOMAIN OR ECTO DOMAIN)/AB 737 SEA ABB=ON PLU=ON ECTODOMAIN/OBI OR ECTO DOMAIN/OBI	
L4 L5	5 SEA ABB=ON PLU=ON L4 AND L1	
ъэ	3 SEA ABB=ON FB0=ON D4 AND D1	
	FILE 'MEDLINE, BIOSIS, EMBASE, WPIX' ENTERED AT 10:40:44 ON 31 AUG 200	6
L6	14584 SEA ABB=ON PLU=ON DENGUE	
L7	6991 SEA ABB=ON PLU=ON ECTODOMAIN OR ECTO DOMAIN	
L8	22 SEA ABB=ON PLU=ON L6 AND L7	
	FILE 'CAPLUS, MEDLINE, BIOSIS, EMBASE, WPIX' ENTERED AT 10:41:25 ON 31	
	AUG 2006	
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	ANSWERS '6-9' FROM FILE MEDLINE	
	ANSWERS '10-12' FROM FILE WPIX	
L10	· ·	
	E LA GARENNE COLOMBES/AU	
	E COLOMBES LA G/AU	
	E LA GARENNE/AU	
L11	65 SEA ABB=ON PLU=ON CATTEAU A?/AU	
L12	308 SEA ABB=ON PLU=ON (L10 OR L11)	
L13	85 SEA ABB=ON PLU=ON L12 AND DENGUE	
	74 SEA ABB=ON PLU=ON L13 NOT L8	
	0 SEA ABB=ON PLU=ON L14 AND (ECTODOMAIN OR ECTO DOMAIN) 2 SEA ABB=ON PLU=ON L14 AND PEPTIDE#	
L16 L17	2 SEA ABB=ON PLU=ON L14 AND PEPITDE# 26 SEA ABB=ON PLU=ON L14 AND SEQUENCE#	
רדי.	D TI 1-10	
L18		
L19		
	ANSWERS '1-6' FROM FILE CAPLUS	
	ANSWERS '7-9' FROM FILE MEDLINE	
	ANSWER '10' FROM FILE BIOSIS	
	ANSWER '11' FROM FILE EMBASE	
	ANSWERS '12-14' FROM FILE WPIX	

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=> fil caplus medline biosis embase wpix
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=> d que 19
           1995 SEA FILE=CAPLUS ABB=ON PLU=ON DENGUE/OBI
L1
            737 SEA FILE=CAPLUS ABB=ON PLU=ON ECTODOMAIN/OBI OR ECTO
L4
                DOMAIN/OBI
              5 SEA FILE=CAPLUS ABB=ON PLU=ON L4 AND L1
L5
          14584 SEA DENGUE
L6
           6991 SEA ECTODOMAIN OR ECTO DOMAIN
L7
             22 SEA L6 AND L7
L8
             12 DUP REM L5 L8 (15 DUPLICATES REMOVED)
1.9
=> d que 119
          14584 SEA DENGUE
L6
           6991 SEA ECTODOMAIN OR ECTO DOMAIN
L7
             22 SEA L6 AND L7
L8
L10
            265 SEA DESPRES P?/AU
L11
             65 SEA CATTEAU A?/AU
            308 SEA (L10 OR L11)
L12
             85 SEA L12 AND DENGUE
L13
L14
             74 SEA L13 NOT L8
              2 SEA L14 AND PEPTIDE#
L16
             26 SEA L14 AND SEQUENCE#
L17
             26 SEA L16 OR L17
L18
             14 DUP REM L18 (12 DUPLICATES REMOVED)
1.19
=> d .ca 19 1-5; d ibib ab ct 19 6-12; d ibib ab 119 1-14
     ANSWER 1 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 1
                         2005:1350338 CAPLUS
ACCESSION NUMBER:
DOCUMENT NUMBER:
                         144:86572
                         Antibodies specific to West Nile virus E proteins for
TITLE:
                         diagnosis, prophylaxis and treatment of flavivirus
                         infection
                         Fikrig, Erol; Gould, Hannah; Koski, Raymond A.;
INVENTOR (S):
                         Ledizet, Michel; Marasco, Wayne A.
PATENT ASSIGNEE(S):
                         USA
                         PCT Int. Appl., 111 pp.
SOURCE:
                         CODEN: PIXXD2
DOCUMENT TYPE:
                         Patent
LANGUAGE:
                         English
FAMILY ACC. NUM. COUNT:
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PATENT INFORMATION:

1150 - 21

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PATENT NO.
                       KTND
                               DATE
                                         APPLICATION NO.
                       ____
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                                          ______
    ______
    WO 2005123774
                       A2
                               20051229 WO 2005-US22188 20050615
        W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
            CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
            GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ,
            LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA,
            NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK,
            SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU,
            ZA, ZM, ZW
        RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
            AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
            EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
            RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
            MR, NE, SN, TD, TG
PRIORITY APPLN. INFO.:
                                           US 2004-580248P
                                                             P 20040615
                                           US 2004-613369P P 20040927
US 2005-646839P P 20050124
```

ED Entered STN: 30 Dec 2005

- AB The present invention relates to anti-West Nile virus E protein (WNE) antibodies, including human antibodies, and antigen-binding portions thereof. In particular, the invention relates to such antibodies and portions that prevent, inhibit, or treat a flavivirus infection, including a West Nile Virus infection. The invention also relates to antibodies that are chimeric, bispecific, derivatized, single chain antibodies or that are portions of fusion proteins. The invention also relates to isolated heavy and light chain Igs derived from human anti-WNE antibodies and nucleic acid mols. encoding such Igs. The present invention also relates to methods of making human anti-WNE antibodies, compns. comprising these antibodies and methods of using the antibodies and compns. for diagnosis, prophylaxis and treatment. The invention also provides gene therapy methods using nucleic acid mols. encoding the heavy and/or light Ig mols. that comprise the human anti-WNE antibodies. The invention also relates to transgenic animals or plants comprising nucleic acid mols. of the present invention.
- IC ICM C07K016-00
- CC 15-3 (Immunochemistry)
- IT Protein motifs

(ectodomain I and II; human antibodies specific to West Nile virus E proteins for diagnosis, prophylaxis and treatment of flavivirus infection)

IT Adoptive immunotherapy

B cell (lymphocyte)

Blood serum

Dengue virus

Dengue virus 1

Dengue virus 2

Dengue virus 3

Dengue virus 4

Dissociation constant

Drug delivery systems

Epitopes

Flavivirus

Genetic vectors

Human

Immunoassay

Japanese encephalitis virus

Kunjin virus

Molecular cloning
Murray Valley encephalitis virus
Phage display library
Protein sequences
St. Louis encephalitis virus
West Nile virus
cDNA sequences

(human antibodies specific to West Nile virus E proteins for diagnosis, prophylaxis and treatment of flavivirus infection)

L9 ANSWER 2 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 2

ACCESSION NUMBER:

2005:2227 CAPLUS

DOCUMENT NUMBER:

142:86611

TITLE:

Attenuated flavivirus strains containing a mutated M-

ectodomain and their applications
Despres, Philippe; Catteau, Adeline

INVENTOR(S):
PATENT ASSIGNEE(S):

Institut Pasteur, Fr.

SOURCE:

U.S. Pat. Appl. Publ., 30 pp.

CODEN: USXXCO

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE		
US 2004266987	A1	20041230	US 2003-608029	20030630		
PRIORITY APPLN. INFO.:			US 2003-608029	20030630		

ED Entered STN: 31 Dec 2004

AB The present invention relates to nine residue peptides (ApoptoM) from flavivirus M ectodomain able to modulate specifically the apoptotic activity of diverse flavivirus, to pharmaceutical composition comprising the same and their use for the treatment and/or the prevention of flavivirus-linked infections and cancers.

IC ICM C12Q001-70

ICS A61K039-12; A61K039-193; C07K002-00; C07K004-00; C07K005-00; C07K007-00; C07K014-00; C07K016-00; C07K017-00; A61K038-00; C07K001-00

INCL 530300000; 530350000; 424204100; 424218100

CC 1-5 (Pharmacology)

Section cross-reference(s): 6, 10

ST flavivrus M protein **ectodomain** peptide apoptosis induction vaccine

IT Proteins

RL: BPN (Biosynthetic preparation); DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(M (matrix); attenuated flavivrus strains containing a mutated m-

ectodomain and their applications)

IT Antiviral agents

Dengue virus 1

Dengue virus 2

Flavivirus

Immunoassay

Japanese encephalitis virus

Protein sequences

Vaccines

Viral RNA sequences

Yellow fever virus

(attenuated flavivrus strains containing a mutated m-ectodomain and their applications)

```
Drug delivery systems
IT
        (carriers; attenuated flavivrus strains containing a mutated m-
        ectodomain and their applications)
     Protein motifs
IT
        (ectodomain, pro-apoptosis peptide derived from; attenuated
        flavivrus strains containing a mutated m-ectodomain and their
        applications)
IT
     Human
        (flavivrus infection detection in; attenuated flavivrus strains containing
        a mutated m-ectodomain and their applications)
IT
     Diagnosis
        (mol.; attenuated flavivrus strains containing a mutated m-
        ectodomain and their applications)
     Antibodies and Immunoglobulins.
IT
     RL: ARG (Analytical reagent use); DGN (Diagnostic use); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (monoclonal, to dengue virus 2 M protein ectodomain
        ; attenuated flavivrus strains containing a mutated m-ectodomain
        and their applications)
     Immobilization, molecular or cellular
IT
        (of dengue virus 2 M protein ectodomain derived
        peptide; attenuated flavivrus strains containing a mutated m-
        ectodomain and their applications)
     Fusion proteins (chimeric proteins)
IT
     RL: BPN (Biosynthetic preparation); DGN (Diagnostic use); THU (Therapeutic
     use); BIOL (Biological study); PREP (Preparation); USES (Uses)
        (of dengue virus 2 M protein ectodomain derived
        peptide; attenuated flavivrus strains containing a mutated m-
        ectodomain and their applications)
IT
     Plasmid vectors
        (pC95-114-EGFPM1-40(I136F)DEN-2; attenuated flavivrus strains containing a
        mutated m-ectodomain and their applications)
     Peptides, biological studies
· TT
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
         (pro-apoptosis, derived from dengue virus 2 M protein
        ectodomain; attenuated flavivrus strains containing a mutated m-
        ectodomain and their applications)
 IT
     Flavivirus
         (recombinant, containing mutated protein ectodomain; attenuated
        flavivrus strains containing a mutated m-ectodomain and their
        applications)
 TΤ
     Mutagenesis
         (site-directed, of dengue virus 2 M protein
        ectodomain; attenuated flavivrus strains containing a mutated m-
        ectodomain and their applications)
     Antibodies and Immunoglobulins
 IT
     RL: ARG (Analytical reagent use); DGN (Diagnostic use); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (to dengue virus 2 M protein ectodomain; attenuated
        flavivrus strains containing a mutated m-ectodomain and their
        applications)
     819074-11-8
 IT
     RL: PRP (Properties)
         (Unclaimed; attenuated flavivirus strains containing a mutated M-
        ectodomain and their applications)
 IT
     174515-88-9 212568-00-8 212622-13-4
                                                212900-31-7
                                                              212900-32-8
                   255698-48-7 485261-07-2 486165-36-0 486165-37-1
      212900-33-9
      486165-38-2 486165-43-9 486196-81-0 486196-82-1 489821-07-0
     RL: BSU (Biological study, unclassified); PRP (Properties); BIOL
```

Franco Salveza 10/608,029 (Biological study) (amino acid sequence; attenuated flavivrus strains containing a mutated mectodomain and their applications) ΙT 819098-43-6D, derivs. claimed RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (dengue virus 2 M protein ectodomain derived peptide; attenuated flavivrus strains containing a mutated mectodomain and their applications) IT 140977-36-2 164447-31-8, GenBank U21055 165915-82-2, GenBank U17066 210508-08-0, GenBank AF052437 210508-09-1, 165915-83-3, GenBank U17067 GenBank AF052438 210508-10-4, GenBank AF052439 210508-24-0, GenBank AF052444 210508-25-1, GenBank AF052445 210508-26-2, GenBank AF052446 221425-89-4, GenBank AF094612 384469-39-0 385281-78-7 385281-79-8 385281-80-1 RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study) (nucleotide sequence; attenuated flavivrus strains containing a mutated mectodomain and their applications) 819098-92-5 819098-93-6 819098-94-7 819098-95-8 819098-96-9 IT 819098-98-1 819098-97-0 819098-99-2 819099-00-8 819099-01-9 819099-02-0 819099-03-1 819099-04-2 819099-05-3 819099-06-4 819099-07-5 819099-08-6 819099-09-7 819099-10-0 819099-11-1 819099-12-2 819099-16-6 819099-17-7 819099-18-8 819099-20-2 819099-21-3 819099-22-4 819099-24-6 RL: PRP (Properties) (unclaimed nucleotide sequence; attenuated flavivirus strains containing a mutated M-ectodomain and their applications) 819099-14-4 819099-15-5 819099-13-3 819099-19-9 819099-23-5 TT RL: PRP (Properties) (unclaimed protein sequence; attenuated flavivirus strains containing a mutated M-ectodomain and their applications) 819074-12-9 IT RL: PRP (Properties) (unclaimed sequence; attenuated flavivirus strains containing a mutated Mectodomain and their applications) ANSWER 3 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 3 ACCESSION NUMBER: 2004:51428 CAPLUS DOCUMENT NUMBER: 140:177012 TITLE: Structure of the dengue virus envelope protein after membrane fusion AUTHOR (S): Modis, Yorgo; Ogata, Steven; Clements, David; Harrison, Stephen C. CORPORATE SOURCE: Howard Hughes Medical Institute, Children's Hospital and Harvard Medical School, Boston, MA, 02115, USA SOURCE: Nature (London, United Kingdom) (2004), 427(6972), 313-319 CODEN: NATUAS; ISSN: 0028-0836 PUBLISHER: Nature Publishing Group DOCUMENT TYPE: Journal LANGUAGE: English Entered STN: 21 Jan 2004 AB Dengue virus enters a host cell when the viral envelope glycoprotein, E, binds to a receptor and responds by conformational rearrangement to the reduced pH of an endosome. The conformational change induces fusion of

viral and host-cell membranes. A three-dimensional structure of the soluble

E ectodomain (sE) in its trimeric, postfusion state reveals striking differences from the dimeric, prefusion form. The elongated trimer bears three fusion loops' at one end, to insert into the host-cell membrane.

Their structure allows us to model directly how these fusion loops interact with a lipid bilayer. The protein folds back on itself, directing its carboxy terminus towards the fusion loops. We propose a fusion mechanism driven by essentially irreversible conformational changes in E and facilitated by fusion-loop insertion into the outer bilayer leaflet. Specific features of the folded-back structure suggest strategies for inhibiting flavivirus entry.

CC 6-3 (General Biochemistry)
 Section cross-reference(s): 75

ST **dengue** virus envelope protein E conformation cell membrane bilayer

IT Envelope proteins

RL: BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); BIOL (Biological study); PROC (Process)

(E; conformational changes of **dengue** virus envelope protein E enhances its fusion to cell membrane through fusion-loop insertion)

IT Membrane, biological

(bilayer, lipid; conformational changes of dengue virus envelope protein E enhances its fusion to cell membrane through fusion-loop insertion)

IT Cell membrane

Conformational transition

(conformational changes of dengue virus envelope protein E enhances its fusion to cell membrane through fusion-loop insertion)

IT Protein motifs

(ectodomain; conformational changes of dengue virus envelope protein E enhances its fusion to cell membrane through fusion-loop insertion)

IT Conformation

(loop, protein, three fusion loops; conformational changes of dengue virus envelope protein E enhances its fusion to cell membrane through fusion-loop insertion)

IT Secondary structure

(protein; conformational changes of **dengue** virus envelope protein E enhances its fusion to cell membrane through fusion-loop insertion)

REFERENCE COUNT:

51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 4 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 6

ACCESSION NUMBER:

2003:819376 CAPLUS

DOCUMENT NUMBER:

140:90406

TITLE:

Dengue virus M protein contains a

proapoptotic sequence referred to as ApoptoM
AUTHOR(S): Catteau, Adeline; Kalinina, Olga; Wagner,
Marie-Christine; Deubel, Vincent; Courageot,

Marie-Pierre; Despres, Philippe

CORPORATE SOURCE:

Unite Postulante des Interactions Moleculaires

Flavivirus-Hotes, Institut Pasteur, Paris, 75724/15,

Fr.

SOURCE:

Journal of General Virology (2003), 84(10), 2781-2793

CODEN: JGVIAY; ISSN: 0022-1317

PUBLISHER: DOCUMENT TYPE: Society for General Microbiology Journal

LANGUAGE: English
ED Entered STN: 19 Oct 2003

AB The induction of apoptotic cell death is a prominent cytopathic effect of dengue (DEN) viruses. One of the key questions to be addressed is which viral components induce apoptosis in DEN virus-infected cells. This study

investigated whether the small membrane (M) protein was involved in the induction of apoptosis by DEN virus. This was addressed by using a series of enhanced green fluorescent protein-fused DEN proteins. Evidence is provided that intracellular production of the M ectodomains (residues M-1 to M-40) of all four DEN serotypes triggered apoptosis in host cells such as mouse neuroblastoma Neuro 2a and human hepatoma HepG2 cells. The M ectodomains of the wild-type strains of Japanese encephalitis, West Nile and yellow fever viruses also had proapoptotic properties. The export of the M ectodomain from the Golgi apparatus to the plasma membrane appeared to be essential for the initiation of apoptosis. The study found that anti-apoptosis protein Bcl-2 protected HepG2 cells against the death-promoting activity of the DEN M ectodomain. This suggests that the M ectodomain exerts its cytotoxic effects by activating a mitochondrial apoptotic pathway. The cytotoxicity of the DEN M ectodomain reflected the intrinsic proapoptotic properties of the nine carboxy-terminal amino acids (residues M-32 to M-40) designated ApoptoM. Residue M-36 was unique in that it modulated the death-promoting activity of the M ectodomain. Defining the ApoptoM-activated signalling pathways leading to apoptosis will provide the basis for studying how the M protein might play a key role in the fate of the flavivirus-infected cells. 10-1 (Microbial, Algal, and Fungal Biochemistry) dengue virus M protein apoptosis ApoptoM Proteins RL: BSU (Biological study, unclassified); BIOL (Biological study) (Bcl-2; dengue virus M protein contains proapoptotic sequence referred to as ApoptoM) Animal cell line (Hep G2; dengue virus M protein contains proapoptotic sequence referred to as ApoptoM) Proteins RL: BSU (Biological study, unclassified); BIOL (Biological study) (M (matrix); dengue virus M protein contains proapoptotic sequence referred to as ApoptoM) Protein motifs (M ectodomain; dengue virus M protein contains proapoptotic sequence referred to as ApoptoM) Animal cell line (N2A; denque virus M protein contains proapoptotic sequence referred to as ApoptoM) Apoptosis Cell membrane Dengue virus Golgi apparatus Human Mitochondria Protein sequences Signal transduction, biological (dengue virus M protein contains proapoptotic sequence referred to as ApoptoM) THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS REFERENCE COUNT: 47 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT ANSWER 5 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN 2005:325740 CAPLUS ACCESSION NUMBER: DOCUMENT NUMBER: 142:385982 Small peptides having apoptotic activities and their TITLE: applications

Despres, Philippe; Catteau, Adeline

U.S. Pat. Appl. Publ., 43 pp., Cont.-in-part of U.S.

Institut Pasteur, Fr.

SOURCE:

INVENTOR (S):

PATENT ASSIGNEE(S):

CC

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Ser. No. 311,213. CODEN: USXXCO

DOCUMENT TYPE:

Patent English

LANGUAGE:

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

	PAT	CENT 1	. O <i>l</i>			KIND DATE				APPL	ICAT:		DATE							
	US 2005080231				A1 20050414				US 2003-608147						2	0030	630			
	WO 2001096376					A2					WO 2001-IB1570						20010618			
	WO	2001	0963	76		А3		2003	0313				-							
	WO	2001	0963	76		C2		2003	1023											
		W:	ΑE,	AG,	AL,	AM,	ΑT,	AU,	AZ,	BA,	BB,	BG,	BR,	BY,	ΒZ,	CA,	CH,	CN,		
			CR,	CU,	CZ,	DE,	DK,	DM,	DZ,	EE,	ES,	FI,	GB,	GD,	GE,	GH,	GM,	HR,		
			ΗU,	ID,	IL,	IN,	IS,	JP,	KE,	KG,	ΚP,	KR,	ΚZ,	LC,	LK,	LR,	LS,	LT,		
			LU,	LV,	MA,	MD,	MG,	MK,	MN,	MW,	MX,	MZ,	NO,	NZ,	PL,	PT,	RO,	RU,		
			SD,	SE,	SG,	SI,	SK,	SL,	ТJ,	TM,	TR,	TT,	ΤZ,	ŪΑ,	ŪĠ,	US,	UZ,	VN,		
			YU,	ZA,	ZW															
		RW:	GH,	GM,	ΚE,	LS,	MW,	MZ,	SD,	SL,	SZ,	TZ,	UG,	ZW,	AM,	ΑZ,	BY,	KG,		
			ΚZ,	MD,	RU,	ТJ,	TM,	AT,	BE,	CH,	CY,	DE,	DK,	ES,	FI,	FR,	GB,	GR,		
			ΙE,	IT,	LU,	MC,	NL,	PT,	SE,	TR,	BF,	ВJ,	CF,	CG,	CI,	CM,	GA,	GN,		
			GW,	ML,	MR,	NE,	SN,	TD,	TG											
	US	2004	1018	62		A1		2004	0527		US 2	003-	3112	13		2	0030	519		
	US	2004	0490	16		A1		2004	0311		US 2	003-	6348:	95		2	0030	806		
PRIO	RIT	APP	LN.	INFO	. :						US 2	000-	2121	29P		P 2	0000	616		
								WO 2	001-	IB15	70		W 2	0010	618					
											US 2	003-	3112	13		A2 2	0030	519		
											US 2	001-	8817	10		A3 2	0010	618		

OTHER SOURCE(S):

MARPAT 142:385982

Entered STN: 15 Apr 2005 ED

- The present invention relates to nine residue peptides (M32-40) from AB flavivirus M ectodomain able to modulate specifically the apoptotic activity of diverse flavivirus, to pharmaceutical composition comprising the same and their use for the treatment and/or the prevention of flavivirus-linked infections and cancers. Dengue virus M ectodomain peptide fusion protein containing the M precursor translocation signal sequence induced apoptosis in mouse neuroblastoma Neuro 2a and human hepatoma HepG2 cancer cells.
- ICM C07K007-08

C07K007-06 ICS

INCL 530329000; 530330000

1-6 (Pharmacology)

Section cross-reference(s): 10

- ST apoptotic peptide flavivirus M ectodomain cancer treatment; infection flavivirus treatment apoptotic peptide; dengue virus M ectodomain peptide apoptosis neuroblastoma hepatoma
- IT Plasmids
 - ((95-114)EGFP(M32-M40)DEN-2; small apoptotic peptides from flavivirus M ectodomain for treating and preventing flavivirus-linked infections and cancers)
- Proteins IT
 - RL: BSU (Biological study, unclassified); BIOL (Biological study) (Bcl-2, blocking apoptotic effect of M ectodomain peptides; small apoptotic peptides from flavivirus M ectodomain for treating and preventing flavivirus-linked infections and cancers)
- TΤ CD antigens
 - RL: BSU (Biological study, unclassified); BIOL (Biological study) (CD72, fragment as membrane-anchoring signal peptide targeting glycoproteins to plasma membrane; small apoptotic peptides from

flavivirus M ectodomain for treating and preventing flavivirus-linked infections and cancers) TΤ Proteins RL: BSU (Biological study, unclassified); BIOL (Biological study) (M (matrix), apoptotic peptides of, of flavivirus; small apoptotic peptides from flavivirus M ectodomain for treating and preventing flavivirus-linked infections and cancers) IT Plasmids (Trip.quadrature.U3CMV(95-114)EGFP(237-245)DEN-2; small apoptotic peptides from flavivirus M ectodomain for treating and preventing flavivirus-linked infections and cancers) Structure-activity relationship (apoptosis-inducing, of dengue virus M protein fragments; small apoptotic peptides from flavivirus M ectodomain for treating and preventing flavivirus-linked infections and cancers) Peptides, biological studies ITRL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (apoptotic; small apoptotic peptides from flavivirus M ectodomain for treating and preventing flavivirus-linked infections and cancers) ITLigands RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (binding to target cancer cells, pharmaceutical composition comprising apoptotic peptide and; small apoptotic peptides from flavivirus M ectodomain for treating and preventing flavivirus-linked infections and cancers) ITSamples (biol., anal. of, for flavivirus infection detection; small apoptotic peptides from flavivirus M ectodomain for treating and preventing flavivirus-linked infections and cancers) IT Proteins RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (conjugates, with apoptotic peptide; small apoptotic peptides from flavivirus M ectodomain for treating and preventing flavivirus-linked infections and cancers) Peptides, biological studies RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (conjugates, with carrier protein or nonpeptide or support; small apoptotic peptides from flavivirus M ectodomain for treating and preventing flavivirus-linked infections and cancers) IT Culture media (detection of flavivirus antigens in; small apoptotic peptides from flavivirus M ectodomain for treating and preventing flavivirus-linked infections and cancers) IT Polynucleotides RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (encoding apoptotic peptides; small apoptotic peptides from flavivirus M ectodomain for treating and preventing flavivirus-linked infections and cancers) Blood analysis IT (flavivirus infection detection in; small apoptotic peptides from

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flavivirus M ectodomain for treating and preventing
        flavivirus-linked infections and cancers)
    Gene
     RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified);
     PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological
     study); PREP (Preparation); USES (Uses)
        (for apoptotic peptides; small apoptotic peptides from flavivirus M
        ectodomain for treating and preventing flavivirus-linked
        infections and cancers)
IT
     Proteins
     RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified);
     BIOL (Biological study); PREP (Preparation)
        (green fluorescent, enhanced, marker gene for, recombinant vector
        containing; small apoptotic peptides from flavivirus M ectodomain
        for treating and preventing flavivirus-linked infections and cancers)
IT
     Carcinoma
        (hepatocellular, induction of apoptosis in; small apoptotic peptides
        from flavivirus M ectodomain for treating and preventing
        flavivirus-linked infections and cancers)
     Liver, neoplasm
IT
        (hepatoma, induction of apoptosis in; small apoptotic peptides from
        flavivirus M ectodomain for treating and preventing
        flavivirus-linked infections and cancers)
IT
     Cell
        (host, transformed with recombinant vector; small apoptotic peptides
        from flavivirus M ectodomain for treating and preventing
        flavivirus-linked infections and cancers)
     Antibodies and Immunoglobulins
IT
     RL: ARG (Analytical reagent use); BSU (Biological study, unclassified);
     DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study);
     USES (Uses)
        (labeled; small apoptotic peptides from flavivirus M ectodomain
        for treating and preventing flavivirus-linked infections and cancers)
IT
     Antibodies and Immunoglobulins
     RL: ARG (Analytical reagent use); BPN (Biosynthetic preparation); BSU
     (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical
     study); BIOL (Biological study); PREP (Preparation); USES (Uses) (monoclonal, to apoptotic peptide; small apoptotic peptides from
        flavivirus M ectodomain for treating and preventing
        flavivirus-linked infections and cancers)
     Nerve, neoplasm
IT
        (neuroblastoma, induction of apoptosis in; small apoptotic peptides
        from flavivirus M ectodomain for treating and preventing
        flavivirus-linked infections and cancers)
     Diagnosis
TТ
        (of flavivirus infection, direct detection method for; small apoptotic
        peptides from flavivirus M ectodomain for treating and
        preventing flavivirus-linked infections and cancers)
IT
     Antigens
     RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (of flavivirus, detection in culture medium or biol. sample; small
        apoptotic peptides from flavivirus M ectodomain for treating
        and preventing flavivirus-linked infections and cancers)
     Mitochondrial membrane potential
        (peptide fusion protein disruption of; small apoptotic peptides from
        flavivirus M ectodomain for treating and preventing
        flavivirus-linked infections and cancers)
IT
     Reactive oxygen species
     RL: MSC (Miscellaneous)
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(peptide fusion protein triggering of apoptotic pathway not involving;
        small apoptotic peptides from flavivirus M ectodomain for
        treating and preventing flavivirus-linked infections and cancers)
IT
    Proteins
    RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (prM (premembrane), translocation signal peptide of, recombinant vector
        further comprising; small apoptotic peptides from flavivirus M
        ectodomain for treating and preventing flavivirus-linked
        infections and cancers)
ΙT
    Cell membrane
        (recombinant vector further comprising membrane-anchoring signal
        peptide targeting glycoproteins to; small apoptotic peptides from
        flavivirus M ectodomain for treating and preventing
        flavivirus-linked infections and cancers)
IT
    Glycoproteins
    RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (recombinant vector further comprising membrane-anchoring signal
        peptide targeting, to plasma membrane; small apoptotic peptides from
        flavivirus M ectodomain for treating and preventing
        flavivirus-linked infections and cancers)
IT
    Proteins
    RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified);
    PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological
    study); PREP (Preparation); USES (Uses)
        (secretory pathway-targeting, recombinant vector further comprising;
        small apoptotic peptides from flavivirus M ectodomain for
        treating and preventing flavivirus-linked infections and cancers)
IT
    Endoplasmic reticulum
        (signal peptide targeting, recombinant vector further comprising; small
        apoptotic peptides from flavivirus M ectodomain for treating
        and preventing flavivirus-linked infections and cancers)
IT
    Antitumor agents
    Apoptosis
    Bioassay
      Dengue virus
       Dengue virus 1
       Dengue virus 2
       Dengue virus 3
       Dengue virus 4
    Drug delivery systems
    Drug screening
    Flavivirus
    Gene therapy
    Genetic markers
    Genetic vectors
    Human
     Immunoassay
    Japanese encephalitis virus
    Neoplasm
    Prophylaxis
    West Nile virus
    Yellow fever virus
        (small apoptotic peptides from flavivirus M ectodomain for
        treating and preventing flavivirus-linked infections and cancers)
IT
    Fusion proteins (chimeric proteins)
    RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified);
    PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological
     study); PREP (Preparation); USES (Uses)
        (small apoptotic peptides from flavivirus M ectodomain for
        treating and preventing flavivirus-linked infections and cancers)
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IT
    Antibodies and Immunoglobulins
    RL: ANT (Analyte); ARG (Analytical reagent use); BPN (Biosynthetic
    preparation); BSU (Biological study, unclassified); DGN (Diagnostic use);
    ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES
        (to apoptotic peptide; small apoptotic peptides from flavivirus M
        ectodomain for treating and preventing flavivirus-linked
        infections and cancers)
IT
    Signal peptides
    RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified);
    PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological
    study); PREP (Preparation); USES (Uses)
        (translocation, recombinant vector further comprising; small apoptotic
       peptides from flavivirus M ectodomain for treating and
       preventing flavivirus-linked infections and cancers)
IT
    Infection
        (viral, flavivirus, prevention and treatment of; small apoptotic
       peptides from flavivirus M ectodomain for treating and
       preventing flavivirus-linked infections and cancers)
ΙT
     849707-92-2
    RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);
    PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES
     (Uses)
        (M peptide of Japanese encephalitis virus, proapoptotic activity of;
        small apoptotic peptides from flavivirus M ectodomain for
        treating and preventing flavivirus-linked infections and cancers)
IT
    849707-91-1
    RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);
    PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES
     (Uses)
        (M peptide of West Nile virus, proapoptotic activity of; small
        apoptotic peptides from flavivirus M ectodomain for treating
        and preventing flavivirus-linked infections and cancers)
     849707-87-5
IT
    RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);
    PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES
        (M peptide of dengue virus 1, proapoptotic activity of; small
        apoptotic peptides from flavivirus M ectodomain for treating
       and preventing flavivirus-linked infections and cancers)
TT
     849707-88-6
    RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);
    PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES
     (Uses)
        (M peptide of dengue virus 3, proapoptotic activity of; small
        apoptotic peptides from flavivirus M ectodomain for treating
        and preventing flavivirus-linked infections and cancers)
     849707-89-7
TΤ
    RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);
    PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES
     (Uses)
        (M peptide of dengue virus 4, proapoptotic activity of; small
       apoptotic peptides from flavivirus M ectodomain for treating
       and preventing flavivirus-linked infections and cancers)
IT
     849707-90-0
    RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);
    PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES
     (Uses)
        (M peptide of yellow fever virus 17D, proapoptotic activity of; small
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apoptotic peptides from flavivirus M ectodomain for treating

and preventing flavivirus-linked infections and cancers) 849707-86-4 IT 849707-84-2 849707-85-3 RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study) (M protein fragment, apoptosis induction in relation to; small apoptotic peptides from flavivirus M ectodomain for treating and preventing flavivirus-linked infections and cancers) 849612-62-0 849612-63-1 849612-64-2 849612-65-3 TΤ 849707-94-4 RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study) (dengue virus M protein fragment, apoptosis induction in relation to; small apoptotic peptides from flavivirus M ectodomain for treating and preventing flavivirus-linked infections and cancers) 169592-56-7, Caspase-3 180189-96-2, Caspase-9 186322-81-6, Caspase IT RL: BSU (Biological study, unclassified); BIOL (Biological study) (inhibitor protecting against proapoptotic effects of M ectodomain; small apoptotic peptides from flavivirus M ectodomain for treating and preventing flavivirus-linked infections and cancers) 7782-44-7D, Oxygen, reactive species IT RL: MSC (Miscellaneous) (peptide fusion protein triggering of apoptotic pathway not involving; small apoptotic peptides from flavivirus M ectodomain for treating and preventing flavivirus-linked infections and cancers) 849612-60-8D, fusion proteins with enhanced green fluorescent protein and IT M ectodomain peptide RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (prM translocation signal sequence, proapoptotic activity of and caspase activation by; small apoptotic peptides from flavivirus M ectodomain for treating and preventing flavivirus-linked infections and cancers) 849612-61-9 IT RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (small apoptotic peptides from flavivirus M ectodomain for treating and preventing flavivirus-linked infections and cancers) IT 849645-65-4 RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study) (small apoptotic peptides from flavivirus M ectodomain for treating and preventing flavivirus-linked infections and cancers)

MEDLINE on STN **DUPLICATE 4** ANSWER 6 OF 12 2003532469 MEDLINE ACCESSION NUMBER: PubMed ID: 14610213 DOCUMENT NUMBER: Replication-defective adenoviral vaccine vector for the TITLE: induction of immune responses to dengue virus type 2. Jaiswal Smita; Khanna Navin; Swaminathan S International Centre for Genetic Engineering and CORPORATE SOURCE: Biotechnology, New Delhi 110067, India. Journal of virology, (2003 Dec) Vol. 77, No. 23, pp. SOURCE:

12907-13.

Journal code: 0113724. ISSN: 0022-538X.

PUB. COUNTRY:

United States

DOCUMENT TYPE:

Journal; Article; (JOURNAL ARTICLE)

LANGUAGE:

15 15 .

English

FILE SEGMENT:

Priority Journals

ENTRY MONTH:

200401

ENTRY DATE:

Entered STN: 13 Nov 2003

Last Updated on STN: 6 Jan 2004

Entered Medline: 5 Jan 2004

alternative strategy for the development of dengue virus

AB A recombinant replication-defective adenovirus vector that can overexpress the ectodomain of the envelope protein of dengue virus type 2 (NGC strain) has been constructed. This virus was immunogenic in mice and elicited dengue virus type 2 specific B- and T-cell responses. Sera from immunized mice contained neutralizing antibodies that could specifically recognize dengue virus type 2 and neutralize its infectivity in vitro, indicating that this approach has the potential to confer protective immunity. In vitro stimulation of splenocytes (from immunized mice) with dengue virus type 2 resulted in a significant proliferative response accompanied by the production of high levels of gamma interferon but did not show significant changes in interleukin-4 levels. This is suggestive of a Th1-like response (considered to be important in the maturation of cytotoxic T lymphocytes that are essential for the elimination of virus-infected cells). The data show that adenovirus vectors offer a promising

vaccines. CT Adenovir

Adenoviridae: GE, genetics *Adenoviridae: IM, immunology Adenoviridae: PH, physiology

Animals

Antibodies, Viral: BI, biosynthesis

Cell Line Cricetinae

Defective Viruses: GE, genetics
*Defective Viruses: IM, immunology
Defective Viruses: PH, physiology
*Dengue Virus: IM, immunology
Electrophoresis, Polyacrylamide Gel

*Genetic Vectors

Humans

Interferon Type II: BI, biosynthesis

Interleukin-4: BI, biosynthesis

Mice

Neutralization Tests

Research Support, Non-U.S. Gov't

Virus Replication

L9 ANSWER 7 OF 12 MEDLINE on STN DUPLICATE 5

ACCESSION NUMBER: DOCUMENT NUMBER:

2003273060 MEDLINE PubMed ID: 12759475

TITLE:

A liquid-binding pocket in the dengue virus

envelope glycoprotein.

AUTHOR:

Modis Yorgo; Ogata Steven; Clements David; Harrison Stephen

С

CORPORATE SOURCE:

Howard Hughes Medical Institute, Children's Hospital and

Harvard Medical School, 320 Longwood Avenue, Boston, MA

02115, USA.

CONTRACT NUMBER:

CA13202 (NCI)

SOURCE:

Proceedings of the National Academy of Sciences of the

United States of America, (2003 Jun 10) Vol. 100, No. 12,

pp. 6986-91. Electronic Publication: 2003-05-20.

Journal code: 7505876. ISSN: 0027-8424.

PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals OTHER SOURCE: PDB-10AM; PDB-10AN

ENTRY MONTH: 200307

ENTRY DATE: Entered STN: 12 Jun 2003

Last Updated on STN: 23 Jul 2003 Entered Medline: 22 Jul 2003

AB Dengue virus is an emerging global health threat. Its major envelope glycoprotein, E, mediates viral attachment and entry by membrane fusion. A crystal structure of the soluble ectodomain of E from dengue virus type 2 reveals a hydrophobic pocket lined by residues that influence the pH threshold for fusion. The pocket, which accepts a hydrophobic ligand, opens and closes through a conformational shift in a beta-hairpin at the interface between two domains. These features point to a structural pathway for the fusion-activating transition and suggest a strategy for finding small-molecule inhibitors of dengue and other flaviviruses.

CT Binding Sites

Crystallography, X-Ray

Dengue Virus: GE, genetics
*Dengue Virus: ME, metabolism
Dengue Virus: PY, pathogenicity
Dengue Virus: PH, physiology

Dimerization

Humans Ligands

Membrane Fusion Models, Molecular

Peptide Fragments: CH, chemistry Peptide Fragments: GE, genetics Peptide Fragments: ME, metabolism Protein Structure, Quaternary

Protein Subunits

Recombinant Proteins: CH, chemistry
Recombinant Proteins: GE, genetics
Recombinant Proteins: ME, metabolism
Research Support, Non-U.S. Gov't
Research Support, U.S. Gov't, P.H.S.
*Viral Envelope Proteins: CH, chemistry
Viral Envelope Proteins: GE, genetics
*Viral Envelope Proteins: ME, metabolism

Virus Assembly

L9 ANSWER 8 OF 12 MEDLINE on STN DUPLICATE 7

ACCESSION NUMBER: 2003256723 MEDLINE DOCUMENT NUMBER: PubMed ID: 12783086

TITLE: Dendritic-cell-specific ICAM3-grabbing non-integrin is

essential for the productive infection of human dendritic

cells by mosquito-cell-derived dengue viruses.

AUTHOR: Navarro-Sanchez Erika; Altmeyer Ralf; Amara Ali; Schwartz

Olivier; Fieschi Franck; Virelizier Jean-Louis; Arenzana-Seisdedos Fernando; Despres Philippe

CORPORATE SOURCE: Interactions Moleculaires Flavivirus-Hotes, 25 Rue du Dr

Roux, 75724 Paris, France.

SOURCE: EMBO reports, (2003 Jul) Vol. 4, No. 7, pp. 723-8.

Journal code: 100963049. ISSN: 1469-221X.

England: United Kingdom PUB. COUNTRY:

Journal; Article; (JOURNAL ARTICLE) DOCUMENT TYPE:

English LANGUAGE:

Priority Journals FILE SEGMENT:

200404 ENTRY MONTH:

Entered STN: 4 Jun 2003 ENTRY DATE:

> Last Updated on STN: 21 Apr 2004 Entered Medline: 20 Apr 2004

Dengue virus (DV) is a mosquito-borne flavivirus that causes AB haemorrhagic fever in humans. DV primarily targets immature dendritic cells (DCs) after a bite by an infected mosquito vector. Here, we analysed the interactions between DV and human-monocyte-derived DCs at the level of virus entry. We show that the DC-specific ICAM3-grabbing non-integrin (DC-SIGN) molecule, a cell-surface, mannose-specific, C-type lectin, binds mosquito-cell-derived DVs and allows viral replication. Conclusive evidence for the involvement of DC-SIGN in DV infection was obtained by the inhibition of viral infection by anti-DC-SIGN antibodies and by the soluble tetrameric ectodomain of DC-SIGN. Our data show that DC-SIGN functions as a DV-binding lectin by interacting with the DV envelope qlycoprotein. Mosquito-cell-derived DVs may have differential infectivity for DC-SIGN-expressing cells. We suggest that the differential use of DC-SIGN by viral envelope glycoproteins may account for the immunopathogenesis of DVs.

Animals CT

> Antibodies, Monoclonal: IM, immunology Antibodies, Monoclonal: PD, pharmacology

*Antigens, CD: ME, metabolism

Cell Adhesion Molecules: AI, antagonists & inhibitors Cell Adhesion Molecules: IM, immunology

*Cell Adhesion Molecules: ME, metabolism

Cells, Cultured

*Culicidae: VI, virology

Dendritic Cells: CY, cytology *Dendritic Cells: ME, metabolism

*Dendritic Cells: VI, virology *Dengue Virus: PH, physiology

Fluorescent Antibody Technique, Direct

Humans

Hydrogen-Ion Concentration

Lectins, C-Type: AI, antagonists & inhibitors

Lectins, C-Type: IM, immunology *Lectins, C-Type: ME, metabolism

Monocytes: CY, cytology Monocytes: ME, metabolism Monocytes: VI, virology

Receptors, Cell Surface: AI, antagonists & inhibitors

Receptors, Cell Surface: IM, immunology *Receptors, Cell Surface: ME, metabolism

Research Support, Non-U.S. Gov't

DUPLICATE 8 ANSWER 9 OF 12 MEDLINE on STN

1999139041 MEDLINE ACCESSION NUMBER: DOCUMENT NUMBER: PubMed ID: 9971841

PrM- and cell-binding domains of the dengue virus TITLE:

E protein.

Wang S; He R; Anderson R AUTHOR:

Department of Microbiology and Immunology, Dalhousie CORPORATE SOURCE:

University, Halifax, Nova Scotia B3H 4H7, Canada.

Journal of virology, (1999 Mar) Vol. 73, No. 3, pp. SOURCE:

2547-51.

Journal code: 0113724. ISSN: 0022-538X.

PUB. COUNTRY:

United States

DOCUMENT TYPE:

Journal; Article; (JOURNAL ARTICLE)

LANGUAGE:

English

FILE SEGMENT:

Priority Journals

ENTRY MONTH:

199903

ENTRY DATE:

Entered STN: 16 Mar 1999

Last Updated on STN: 16 Mar 1999

Entered Medline: 4 Mar 1999

The E-prM proteins of flaviviruses are unusual complexes which play AB important roles in virus assembly and fusion modulation and in potential immunity-inducing vaccines. Despite their importance, little is known about the biogenesis and structural organization of E-prM complexes. Pulse-chase radiolabeling of dengue virus-infected Vero cells demonstrated a rapid interassociation of E and prM proteins, and sucrose gradient sedimentation analysis suggested that E-prM complexes progressed from simple heteromers to more densely sedimenting structures indicating increased multimerization. E-prM heteromers of even higher complexity were observed in virus particles, suggesting an intracellular assembly process which results in the networking of E-prM subunits into a lattice-like structure found in virus particles. Trypsin cleavage of E-prM-containing virus particles resulted in the release of a soluble 45-kDa fragment of the E protein which retained cell-binding activity. The results suggest that E-prM interactions in dengue virus particles are largely mediated by domains in the carboxy-terminal anchoring domain of E, while cell-binding activity is retained in a trypsin-releasable ectodomain of the E protein.

CT

Animals Binding Sites

Cercopithecus aethiops

*Dengue Virus: PH, physiology *Receptors, Virus: PH, physiology Research Support, Non-U.S. Gov't

Trypsin: PD, pharmacology

Vero Cells

*Viral Proteins: PH, physiology

Virion: PH, physiology

L9 ANSWER 10 OF 12 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN

ACCESSION NUMBER:

2006-332034 [34] WPIX

DOC. NO. CPI:

C2006-109493

TITLE:

Attenuated Flavivirus, useful for preparing a vaccine against Japanese Encephalitis Virus, West Nile Virus or other disease-causing Flavivirus, comprises a membrane

protein mutation.

DERWENT CLASS:

B04 D16

INVENTOR(S):

CATALAN, J A; GUIRAKHOO, F; LIU, J; MONATH, T P;

PUGACHEV, K V

PATENT ASSIGNEE(S):

(ACAM-N) ACAMBIS INC

COUNTRY COUNT:

112

PATENT INFORMATION:

PATENT NO KIND DATE WEEK LA PG

WO 2006044857 A2 20060427 (200634)* EN 122

RW: AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IS IT KE LS LT LU LV MC MW MZ NA NL OA PL PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE

DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KM KP KR KZ LC LK LR LS LT LU LV LY MA MD MG MK MN MW MX MZ NA NG NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SM SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

APPLICATION DETAILS:

1 FOR "

PATENT NO	KIND	APPLICATION	DATE		
WO 2006044857	A2	WO 2005-US37369	20051019		

PRIORITY APPLN. INFO: US 2005-718923P 20050919; US

20041020; US 2004-620466P 2004-620948P 20041021; US 20050424; US 2005-674415P 2005-674546P 20050425

AB WO2006044857 A UPAB: 20060526

> NOVELTY - A recombinant Flavivirus comprising a membrane protein mutation, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

- (1) a vaccine composition comprising the Flavivirus above and a pharmaceutical carrier or diluent;
- (2) inducing an immune response to a Flavivirus in a patient by administering the vaccine composition;
- (3) producing a vaccine composition comprising a recombinant Flavivirus by introducing a mutation into the membrane protein of the Flavivirus;
- (4) a nucleic acid molecule corresponding to the genome of the Flavivirus comprising a membrane protein mutation; and
- (5) manufacturing the Flavivirus with a membrane protein mutation by introducing a nucleic acid molecule corresponding to the virus genome into cells and isolating Flavivirus produced in the cells from the cells or the culture supernatant.

ACTIVITY - Virucide.

No biological data given.

MECHANISM OF ACTION - Vaccine.

USE - The Flavivirus, vaccine composition and method are useful for inducing an immune response to a Flavivirus. The virus is preferably a Japanese encephalitis virus, West Nile virus, yellow fever virus, dengue virus, St. Louis encephalitis virus, Murray valley encephalitis virus, or tick-borne encephalitis virus. (All claimed). Dwg.0/9

ANSWER 11 OF 12 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN

ACCESSION NUMBER:

2004-097654 [10] WPIX

DOC. NO. NON-CPI:

N2004-07771

DOC. NO. CPI:

C2004-040532

TITLE:

Identifying antibody that inhibits pathogenicity of infectious microorganism such as an orthopox virus using a programmed computer.

DERWENT CLASS:

B04 D16 S05 T01

INVENTOR(S):

RECHE, P; REINHERZ, E L

PATENT ASSIGNEE(S):

(RECH-I) RECHE P; (REIN-I) REINHERZ E L; (DAND) DANA

FARBER CANCER INST INC

COUNTRY COUNT:

102 PATENT INFORMATION:

> PATENT NO KIND DATE WEEK LA

US 2003229454 A1 20031211 (200410)* 25 WO 2004040398 A2 20040513 (200439) EN

RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK

DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PH PL

PT RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN ZA

ZM ZW

AU 2003299469 A1 20040525 (200468)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 2003229454	Al Provisional Provisional	US 2002-380055P US 2003-453649P	20020506 20030311
		US 2003-429685	20030505
WO 2004040398	A2	WO 2003-US13982	20030505
AU 2003299469	A1	AU 2003-299469	20030505

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2003299469	Al Based on	WO 2004040398

PRIORITY APPLN. INFO: US 2003-429685

20030505; US 20020506; US

2002-380055P 2003-453649P

20020300, 0

AB US2003229454 A UPAB: 20040210

NOVELTY - Identifying antibody using programmed computer comprising inputting into input device a nucleic acid sequence of open reading frames (ORF) in genome of infectious microorganism, screening nucleic acid sequence to identify ORF encoding protein expressed on surface of microorganism, producing antibody that binds to ectodomain of protein and determining whether antibody inhibits pathogenicity of infectious microorganism, is new.

DETAILED DESCRIPTION - A computer-based method (M1) of identifying an antibody that inhibits infection, which uses a programmed computer comprising a processor and an input device, involves providing the nucleic acid sequence of several open reading frames (ORF) in the genome of an infectious microorganism, inputting to the input device the nucleic acid sequence, screening the nucleic acid sequence using the processor, to identify an open reading frame encoding a protein that is predicted to be expressed on the surface of the infectious microorganism, producing an antibody that binds to the ectodomain of the protein, and determining whether the antibody inhibits the pathogenicity of the infectious microorganism.

INDEPENDENT CLAIMS are also included for:

- (1) manufacturing (M2) a compound, involves performing (M1) and after determining that the antibody inhibits the pathogenicity of the infectious microorganism, and manufacturing a compound comprising at least a portion of the ectodomain;
- (2) manufacturing (M3) an antibody, involves performing (M1) and after determining that the antibody inhibits the pathogenicity of the infectious microorganism, manufacturing the antibody;
 - (3) a compound manufactured by (M2);
- (4) inducing an immune response in an animal, involves performing (M1) and after determining that the antibody inhibits pathogenicity of the

infectious microorganism, administering a compound comprising at least a portion of the **ectodomain** to an animal susceptible to infection with the infectious microorganism;

- (5) treating (M4), involves performing (M1) and after determining that the antibody inhibits, pathogenicity of the infectious microorganism, administering the antibody to an animal;
 - (6) an antibody manufactured by (M3);
- (7) a monoclonal antibody (I) that binds to a protein encoded by the genome of variola virus or a vaccinia virus, where the protein is a protein that is expressed on the surface of the virus or on the surface of a cell infected with the virus; and
 - (8) a humanized antibody derived from (I). ACTIVITY Antimicrobial.

A group of C57BL/6 (B6) mice (n=5) were injected intraperitoneally with a cocktail containing 200 micro g of each of the 11D7, 13E8, and 7D11 monoclonal antibodies. A second group of B6 mice (n=5) were injected intraperitoneally with 600 micro g of a control monoclonal antibody (1A3). Six hours later, the mice in both groups were challenged intranasally with an LD(50) dose (104 PFU) of vaccinia virus (strain WR). On the ninth day after infection, all mice were sacrificed and the amount of virus in their lungs (in PFU/ml) was measured. The animals injected with the cocktail of antibodies showed a dramatic decrease in viral titer compared with the control mice. No virus was detectable in the lungs of animals 6, 7, 9 and 10. About 102 PFU/ml were detected in the lungs of the animals because 102 PFU/ml was the detection limit of the assay. While all the control animals showed severe morbidity starting on day 7 and loss of fat pads, all the experimental animals appeared clinically normal, retained their fat pads, and had no lung pathology at the time of sacrifice.

MECHANISM OF ACTION - Inhibits pathogenicity of microorganisms (claimed).

USE - (M1) is useful for identifying an antibody that inhibits pathogenicity of a infectious microorganism. The infectious microorganism is a virus (such as variola major/minor virus or vaccinia virus). The virus is chosen from hepatitis virus A-E, human papilloma virus, human immunodeficiency virus 1, human T cell lymphotropic virus 1, Herpes virus, Dengue virus 1-4, Ebola virus, Marburg virus, Lassa virus, Machupo virus and influenza virus. The infectious microorganism is a bacterium. The bacterium is Mycobacterium tuberculosis, Mycobacterium leprae, Salmonella bacterium (such as Salmonella typhimurium or Salmonella typhi) or Yersinia pestis. The bacterium is also chosen from Bacillus anthracis, Clostridium botulinum, Francisella tularensis, Corynebacterium diphtheriae, Vibrio cholerae and Escherichia coli. The infectious microorganism is a protozoan parasite such as a malarial parasite or Leishmania. (M1) is useful for manufacturing a compound comprising at least a portion of the ectodomain. (M1) is useful for manufacturing an antibody which inhibits pathogenicity of an infectious microorganism. (M1) is also useful for inducing an immune response in an animal. The immune response is a protective immune response. (M4) is useful for treating by administering an antibody that inhibits pathogenicity of the infectious microorganism. The infectious microorganism is a virus. The virus is an orthopox virus (such as variola or vaccinia virus). The protein is a smallpox growth factor (SPGF) or a VGF (vaccinia growth factor). The monoclonal antibody is the 3D4R-13E8 monoclonal antibody (ATCC Accession Number PTA-5040) or 3D4R-11D7 monoclonal antibody (ATCC Accession Number PTA-5039). The method further involves administering to the animal one or more additional antibodies, where one or more additional antibodies bind to a protein encoded by the infectious microorganism such as an orthopox virus (all claimed). Dwg.5/6

L9 ANSWER 12 OF 12 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN

ACCESSION NUMBER: 2002-139706 [18] WPIX

DOC. NO. CPI: C2002-043009

TITLE: Novel apoptosis inducing polypeptide fragments of

Dengue virus-1 or 2 M protein, useful for

inducing apoptosis in a cell of a human patient suffering

from cancer or flavivirus infection.

DERWENT CLASS: B04 D16

INVENTOR(S): CATTEAU, A; COURAGEOT, M; DESPRES, P; DEUBEL, V
PATENT ASSIGNEE(S): (INSP) INST PASTEUR; (CATT-I) CATTEAU A; (COUR-I)

COURAGEOT M; (DESP-I) DESPRES P; (DEUB-I) DEUBEL V

COUNTRY COUNT: 95

PATENT INFORMATION:

PAT	PATENT NO			KI	ND DATE			WEEK			LA PG												
WO 2001096376 A2			20011220 (200			002	00218) * EN 45			45	-												
	RW:		_	-									GH	GM	GR	ΙE	IT	KE	LS	LU	MC	MW	MZ
	W:					SE AT							вч	ΒZ	CA	СН	CN	CR	CU	CZ	DE	DK	DM
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EP	131													TE	тт	тт	T.T	LU	LV	MC	мк	NL	РТ
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APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE			
WO 2001096376 AU 2001082388 US 2002086403	A2 A A1 Provisional	WO 2001-IB1570 AU 2001-82388 US 2000-212129P US 2001-881710	20010618 20010618 20000616 20010618			
EP 1311539	A2	EP 2001-961004 WO 2001-IB1570	20010618 20010618			
US 6673895	B2 Provisional	US 2000-212129P US 2001-881710	20000616 20010618			
JP 2004503233	W	WO 2001-IB1570 JP 2002-510516	20010618 20010618			
US 2004049016	Al Provisional Div ex	US 2000-212129P US 2001-881710 US 2003-634895	20000616 20010618 20030806			
US 2004101862	A1	WO 2001-IB1570 US 2003-311213	20010618 20030519			
US 2005080231	A1 Provisional CIP of CIP of	US 2000-212129P WO 2001-IB1570 US 2003-311213 US 2003-608147	20000616 20010618 20030519 20030630			

FILING DETAILS:

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KIND
                                          PATENT NO
     PATENT NO
     AU 2001082388 A Based on
                                       WO 2001096376
                                      WO 2001096376
WO 2001096376
    EP 1311539 A2 Based on
     JP 2004503233 W Based on
    US 2004049016 A1 Div ex .
                                       US 6673895
PRIORITY APPLN. INFO: US 2000-212129P
                                          20000616; US
                     2001-881710
                                       20010618; US
                     2003-634895
                                       20030806; US
                     2003-311213
                                       20030519; US
                     2003-608147
                                       20030630
AB
    WO 200196376 A UPAB: 20020319
    NOVELTY - An isolated polypeptide (I) having a fully defined (a)
    Dengue virus (DEN) - 1 M (a membrane protein anchored in envelope
     surrounding the nucleocapsid of the virus) ectodomain sequence,
     (b) Den-1-C amino acid sequence of 95-114 as given in specification, or
     (c) DEN-2 M ectodomain sequence, is new.
          DETAILED DESCRIPTION - (I) has a fully defined sequence of
     SVALAPHVGLGLETRTETWMSSEGAWKQIQKVETWALRHP (DEN-1 M ectodomain)
     (S1) or SVALVPHVGMGLETRTETWMSSEGAWKHAQRIETWILRHP (DEN-2 M
     ectodomain) (S3), or a fully defined Den-1 C amino acid sequence
     (S2) of 95-114 as given in the specification.
          INDEPENDENT CLAIMS are also included for the following:
          (1) an isolated polynucleotide (II) which encodes (I);
          (2) a vector (III) comprising (II);
          (3) a prokaryotic or eukaryotic cell comprising (II);
          (4) a composition comprising (I) or (II) and a carrier;
          (5) an isolated polypeptide (IV) of the sequence of (S1), operably
     linked to (S2);
          (6) an isolated polynucleotide (V) which encodes (IV);
          (7) a vector (VI) comprising (V);
          (8) a prokaryotic or eukaryotic cell comprising (V);
         (9) a composition comprising (IV) or (V) and a carrier;
          (10) screening (M1) for peptides capable of inducing apoptosis
     involves introducing a recombinant protein into the cell, where the
     recombinant protein comprises the peptide to be screened operably linked
     to (S2) and detecting apoptosis in a cell;
          (11) monoclonal antibodies raised against DEN-1 or DEN-2 viral M
     protein;
          (12) plasmid (95-114)EGFP(M10-M40)DEN-2 deposited at the CNCM under
     the accession number I-2684;
          (13) plasmid pTrip Delta U3(95-114)EGFP(206-245)DEN-2 deposited at
     the CNCM under the accession number I-2686;
          (14) plasmid pTrip Delta U3(95-114)EGFP(206-245)DEN-1 deposited at
     the CNCM under the accession number I-2685; and
          (15) plasmid p(95-114)EGFP(215-245)WNV deposited at the CNCM under
     the accession number I-2475.
          ACTIVITY - Virucide; cytostatic.
          MECHANISM OF ACTION - Apoptosis inducer.
          To test the pro-apoptotic activity of the DEN-2 M ectodomain
     the chimeric protein (95-114)EGFP(206-245)DEN-2 was employed. The region
     of the DEN-2 virus strain Jamaica corresponding the M ectodomain
     (DEN-2 polyprotein 206-245) was fused to the C-terminus of the
     (95-114) EGFP fusion construct. The cytotoxicity of the
     (95-114) EGFP (206-245) DEN-2 chimeric protein was tested by transfecting
     cells with FuGENE 6. The expression of the chimeric protein was observed
     by the autofluorescence of the EGFP and apoptotic cell death was detected
     visually by staining with propidium iodide as described above.
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Intracellular expression of the (95-114)EGFP(206-245)DEN-2 chimeric

protein resulted in cell death. DEN-2 M ectodomain has the ability to induce rapid apoptosis in Neuro 2a, HepG2, HeLa, and VERO cells. Apoptosis was more pronounced after transfection with plasmid (95-114)EGFP(206-245)DEN-2 than after transfection with the plasmid (95-114)EGFP(206-245) containing the sequence of the DEN-1 M ectodomain.

USE - (I) having a sequence of (S3) is useful for inducing apoptosis in the cell of a human patient suffering from cancer or an infection with flavivirus. (I) having a sequence of (S1) or (S3) is useful for screening for molecules which inhibit apoptosis induced by the polypeptide. The method involves introducing the polypeptide into a cell; contacting the cell containing the polypeptide, with the molecule to be screened; and detecting the presence or absence of apoptosis in the cell. The polypeptide which is introduced into the cell is operably linked to the polypeptide of sequence (S2) or (S3) or to a green fluorescent protein. Optionally, the polypeptide is not linked to a green fluorescent protein. Preferably, the polypeptide is introduced into a cell by introducing a polynucleotide (which is an expression vector capable of expressing the polypeptide in a cell) which encodes the polypeptide. (IV) when administered or delivered into a cell is useful for inducing apoptosis in the cell, preferably present in a human patient suffering from cancer or infected with flavivirus. The delivery of (IV) is carried out by delivering a polynucleotide encoding the polypeptide to the cell, where the polynucleotide is in an expression vector suitable to express the polypeptide in the cell (all claimed). The polynucleotides and polypeptides encoded by the polynucleotides as described above are useful for inducing apoptosis, and for treating patients with cancer and patients infected with flavivirus. Dwq.0/15

L19 ANSWER 1 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 1

ACCESSION NUMBER:

2004:740442 CAPLUS 141:237791

TITLE:

Protein and cDNA sequences of new

Dengue and West Nile viruses glycoproteins,

and their use in vaccinal, therapeutic and diagnostic

applications

INVENTOR(S):

Tangy, Frederic; Despres, Philippe;

Combredet, Chantal; Frenkiel, Marie Pascale

PATENT ASSIGNEE(S):

Institut Pasteur, Fr.; Centre National de la Recherche

Scientifique C.N.R.S.

SOURCE:

PCT Int. Appl., 64 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PATENT NO.	KIND DATE	APPLICATION NO.	DATE				
WO 2004076619	A2 20040910	WO 2004-IB1027	27 20040226				
WO 2004076619	A3 20050317						
W: AE, AG, AL	, AM, AT, AU, AZ,	BA, BB, BG, BR, BW, BY	Y, BZ, CA, CH,				
CN, CO, CR	, CU, CZ, DE, DK,	DM, DZ, EC, EE, EG, ES	S, FI, GB, GD,				
GE, GH, GM	, HR, HU, ID, IL,	IN, IS, JP, KE, KG, KI	P, KR, KZ, LC,				
LK, LR, LS	, LT, LU, LV, MA,	MD, MG, MK, MN, MW, MX	K, MZ, NA, NI				
RW: BW, GH, GM	, KE, LS, MW, MZ,	SD, SL, SZ, TZ, UG, ZM	M, ZW, AT, BE,				

Franco Salvoza 10/608,029 ...

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BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU,
            MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN,
            GQ, GW, ML, MR, NE, SN, TD, TG
                                20040826
                                            CA 2003-2420092
                                                                   20030226
    CA 2420092
                         AA
    CA 2432738
                         AA
                                20040826
                                            CA 2003-2432738
                                                                   20030620
    CA 2456873
                         AA
                                20040826
                                            CA 2004-2456873
                                                                   20040226
                                            CA 2004-2517258
    CA 2517258
                         AΑ
                                20040910
                                                                   20040226
    EP 1599495
                         A2
                                            EP 2004-714865
                                20051130
                                                                   20040226
           AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
                                20060214
                                            BR 2004-7840
    BR 2004007840
                                                                   20040226
                         Α
                                            US 2005-210960
    US 2006073164
                         A1
                                20060406
                                                                   20050825
PRIORITY APPLN. INFO.:
                                            CA 2003-2420092
                                                                A 20030226
                                            CA 2003-2432738
                                                                A 20030620
                                            WO 2004-IB1027
                                                                W 20040226
```

AB The present invention relates to the development of viral vectors expressing different immunogens from the West Nile Encephalitis Virus (WNV) or the Dengue virus which are able to induce protective humoral and cellular immune responses against WNV or Dengue virus infections. More specifically, the present invention relates to three (3) antigens from WNV (the secreted envelope glycoprotein (E), the heterodimer glycoproteins (pre-M-E) and the NSI protein) and from Dengue virus (the secreted envelope glycoprotein (e), the heterodimer glycoproteins (pre- m-e) and the NSI protein) and their use in vaccinal, therapeutic and diagnostic applications.

L19 ANSWER 2 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 2

ACCESSION NUMBER: 2003:848534 CAPLUS

DOCUMENT NUMBER: 140:39857

TITLE: Expression of dengue ApoptoM

sequence results in disruption of

mitochondrial potential and caspase activation Catteau, Adeline; Roue, Gael; Yuste, Victor

J.; Susin, Santos A.; Despres, Philippe

CORPORATE SOURCE: Unite des Interactions Moleculaires Flavivirus-Hotes,

Institut Pasteur, Paris, 75015, Fr.
Biochimie (2003), 85(8), 789-793
CODEN: BICMBE; ISSN: 0300-9084

PUBLISHER: Editions Scientifiques et Medicales Elsevier

DOCUMENT TYPE: Journal LANGUAGE: English

AB Apoptotic cell death was involved as a cytopathol. mechanism in response to dengue (DEN) virus infection. Little information exists about how DEN virus replication triggers apoptosis in infected cells. We reported that a 9-residue sequence of the DEN M protein referred to as ApoptoM has proapoptotic properties in transformed and tumor cells of various origins. The aim of the present study was to investigate whether ApoptoM-induced apoptosis is associated to mitochondrial dysfunction and requires caspase activation. Intracellular expression of ApoptoM provokes the disruption of the mitochondrial transmembrane potential without subsequent generation of reactive oxygen species. We showed that ApoptoM-induced apoptosis involves the activation of a caspase-like protease pathway. Caspase-3 like activity was detected in ApoptoM-expressing cells. However, there was no role for caspase-9 in ApoptoM-mediated cell death. These data suggest that a particular mitochondrion-dependent apoptotic pathway may be involved in induction of apoptosis by ApoptoM.

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L19 ANSWER 3 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 3

AUTHOR (S):

SOURCE:

2002:893884 CAPLUS ACCESSION NUMBER:

138:249386 DOCUMENT NUMBER:

Genome analysis of dengue type-1 virus TITLE:

isolated between 1990 and 2001 in Brazil reveals a remarkable conservation of the structural proteins but amino acid differences in the non-structural proteins

Duarte dos Santos, Claudia Nunes; Rocha, Carlos AUTHOR (S):

Fernando S.; Cordeiro, Marli; Fragoso, Stenio P.; Rey,

Felix; Deubel, Vincent; Despres, Philippe

Instituto de Biologia Molecular do Parana, Rio de CORPORATE SOURCE:

Janeiro, Brazil

Virus Research (2002), 90(1-2), 197-205 SOURCE: CODEN: VIREDF; ISSN: 0168-1702

Elsevier Science Ltd. PUBLISHER:

DOCUMENT TYPE: Journal LANGUAGE: English

We have investigated the genetic diversity of dengue type-1 (DEN-1) virus in Brazil. The full nucleotide sequences of three DEN-1 virus isolated from DEN fever (DF) and DEN hemorrhagic fever patients in northeastern Brazil in 1997 (BR/97) and one from a DF patient in the south of Brazil in 2001 (BR/01) were compared to that of the reference strain BR/90 obtained in the city of Rio de Janeiro in 1990. Sequence anal. showed that the structural proteins were remarkably conserved between all isolates. total of 27 amino acid changes occurred throughout the non-structural proteins. Among them, nine amino acid substitutions were specific of BR/97 and BR/01 isolates, indicating that in situ evolution of these strains had occurred. Within the BR/97 and BR/01 samples, some amino acid substitutions have been previously identified in DEN-1 virus strains sequenced so far, suggesting that recombination events might have occurred.

REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L19 ANSWER 4 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 4

2000:881428 CAPLUS ACCESSION NUMBER:

DOCUMENT NUMBER: 134:39168

TTTLE: Early detection of flaviviruses using antibodies to

NS1 glycoprotein

Flamand, Marie; Megret, Francoise; Alcon, Sophie; INVENTOR(S):

Talarmin, Antoine; Despres, Philippe;

Deubel, Vincent

PATENT ASSIGNEE(S): Institut Pasteur, Fr. PCT Int. Appl., 51 pp. SOURCE:

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: French

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PATENT NO.	KIND DATE	APPLICATION NO.	DATE		
			-		
WO 2000075665	A1 20001214	WO 2000-FR1620	20000609		
W: AE, AG, AL	, AM, AT, AU, AZ,	BA, BB, BG, BR, BY, CA,	CH, CN, CR,		
CU, CZ, DE	, DK, DM, DZ, EE,	ES, FI, GB, GD, GE, GH,	GM, HR, HU,		
ID, IL, IN	, IS, JP, KE, KG,	KP, KR, KZ, LC, LK, LR,	LS, LT, LU,		
LV, MA, MD	, MG, MK, MN, MW,	MX, MZ, NO, NZ, PL, PT,	RO, RU, SD,		
SE, SG, SI	, SK, SL, TJ, TM,	TR, TT, TZ, UA, UG, US,	UZ, VN, YU,		
ZA, ZW, AM	, AZ, BY, KG, KZ,	MD, RU, TJ, TM			
RW: GH, GM, KE	, LS, MW, MZ, SD,	SL, SZ, TZ, UG, ZW, AT,	BE, CH, CY,		
DE, DK, ES	, FI, FR, GB, GR,	IE, IT, LU, MC, NL, PT,	SE, BF, BJ,		

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CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
                             20001215
                                        FR 1999-7290
                                                             19990609
                       A1
    FR 2794864
    FR 2794865
                             20001215
                                        FR 1999-7361
                                                             19990610
                       A1
    FR 2794865
                       В1
                             20030418
    EP 1190257
                             20020327
                                        EP 2000-951579
                                                             20000609
                       A1
                       В1
                             20040825
    EP 1190257
        R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
           IE, SI, LT, LV, FI, RO
                             20030812
                                      BR 2000-11369
                                                             20000609
    BR 2000011369
                       Α
                                                             20000609
                       E
                             20040915 AT 2000-951579
    AT 274701
                             20040923 AU 2000-64474
                       B2
                                                             20000609
    AU 776844
                             20041231 PT 2000-951579
                                                             20000609
                      T
    PT 1190257
                             20050401 ES 2000-951579
                                                             20000609
                      Т3
    ES 2226894
                             20020823 ZA 2001-9993
                      Α
                                                             20011205
    ZA 2001009993
                             20050322 US 2002-980839
                                                             20020621
    US 6870032
                      B1
                      A1
                             20050318
                                        HK 2002-107117
                                                             20020926
    HK 1045729
                                        US 2004-17048
                                                             20041221
    US 2005186562
                      A1
                             20050825
                                        FR 1999-7290
                                                         A 19990609
PRIORITY APPLN. INFO.:
                                                       A 19990610
                                        FR 1999-7361
                                                         W 20000609
                                        WO 2000-FR1620
                                                         A3 20020621
                                        US 2002-980839
```

AB The invention concerns a method for early detection of a flavivirus-induced infection, comprising the detection of the flavivirus non-structural glycoprotein NS1 in a biol. sample during the clin. phase of the infection, by an immunol. method using at least two identical or different antibodies, the first antibody consisting of polyclonal or monoclonal antibodies pre-selected for their high affinity for said NS1 protein hexameric in shape.

REFERENCE COUNT:

THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L19 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 6

ACCESSION NUMBER:

1993:642584 CAPLUS

DOCUMENT NUMBER:

119:242584

TITLE:

Differences between cell membrane fusion activities of

two dengue type-1 isolates reflect
• modifications of viral structure

AUTHOR(S):

Despres, Philippe; Frenkiel, Marie Pascale;

Deubel, Vincent

CORPORATE SOURCE:

Unite Arbovirus Virus Fievres Hemorragiques, Inst.

Pasteur, Paris, 75724, Fr.

SOURCE:

Virology (1993), 196(1), 209-19

CODEN: VIRLAX; ISSN: 0042-6822

DOCUMENT TYPE:

Journal

LANGUAGE:

English

AB The genetic diversity of dengue (DEN) virus was explored using two South American DEN-1 virus strains isolated from viremic human sera. DEN-1 virus strains BR/90 and FGA/89 were selected on the basis of their membrane fusion properties in mosquito cell cultures. Infection of mosquito cell lines with BR/90 virus strain induced a cytopathic effect characterized by syncytium formation whereas no cytopathic changes were observed with FGA/89. Cell-to-cell fusion expts. indicated that the fusogenic activity of FGA/89 required a lower pH than BR/90. Immunoreactivity anal. of the DEN-1 envelope (E) protein with monoclonal antibodies revealed a minor difference between the antigenic structures of FGA/89 and BR/90 virions. FGA/89 was less neurovirulent than BR/90 for newborn mouse. To determine the genetic origin of these modifications, the amino acid sequences of the structural proteins from these virus strains

were compared. One amino acid difference was found within the carboxy-terminal domain of protein C. Five amino acid substitutions were found in the E proteins at positions 96, 180, 297, 379, and 473. Changes at positions 96, 297, and 379 map within two overlapping antigenic domains of protein E. These limited amino acid differences in the E protein could affect the biol. properties and the antigenicity of the DEN virion.

L19 ANSWER 6 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER:

2001:923833 CAPLUS

DOCUMENT NUMBER:

136:52711

TITLE:

Pro-apoptotic fragments of the dengue virus

envelope glycoproteins

INVENTOR(S):

Despres, Philippe; Courageot, Marie-Pierre;

Deubel, Vincent; Catteau, Adeline

PATENT ASSIGNEE(S):

Institut Pasteur, Fr.
PCT Int. Appl., 45 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

SOURCE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PA	TENT :	NO.			KIND DATE				APPLICATION NO.						DATE			
WO WO	2001 2001	0963° 0963°	76 76		A2 20011220 A3 20030313			WO 2001-IB1570						2	0010	618		
WO	2001	0963	76		C2 20031023													
	W: AE, AG, AL,				AM,	AT,	AU,	ΑZ,	BA,	BB,	BG,	BR,	BY,	ΒZ,	CA,	CH,	CN,	
		CR,	CU,	CZ,	DE,	DK,	DM,	DZ,	EE,	ES,	FI,	GB,	GD,	GE,	GH,	GM,	HR,	
		HU,	ID,	IL,	IN,	IS,	JP,	KE,	KG,	ΚP,	KR,	ΚZ,	LC,	LK,	LR,	LS,	LT,	
		LU,	LV,	MA,	MD,	MG,	MK,	MN,	MW,	MX,	MZ,	NO,	NZ,	PL,	PT,	RO,	RU,	
		SD,	SE,	SG,	SI,	SK,	SL,	TJ,	TM,	TR,	TT,	TZ,	UA,	ΰĠ,	US,	UΖ,	VN,	
		YU,	ZA,	ZW														
	RW:	GH,	GM,	ΚE,	LS,	MW,	MZ,	SD,	SL,	SZ,	TZ,	UG,	ZW,	AM,	ΑZ,	BY,	KG,	
		ΚZ,	MD,	RU,	TJ,	TM,	AT,	BE,	CH,	CY,	DE,	DK,	ES,	FI,	FR,	GB,	GR,	
		ΙĒ,	IT,	LU,	MC,	NL,	PT,	SE,	TR,	BF,	ВJ,	CF,	CG,	CI,	CM,	GA,	GN,	
		GW,	ML,	MR,	NE,	SN,	TD,	TG										
CA	2412	257			AA		2001	1220	CA 2001-2412257						2	0010	618	
	2002									US 2001-881710					2	0010	618	
	6673				B2 20040106													
EP	1311															0010		
	R:	AT,	BE,	CH,	DE,	DK,	ES,	FR,	GB,	GR,	IT,	LI,	LU,	NL,	ŞΕ,	MC,	PT,	
		•	•	•	•	•	RO,	•	•	•								
	2004						2004									0010		
	2004						2004									0030		
	2005						2005									0030		
	2004				A1		2004	0311			003-					0030		
PRIORIT	CIORITY APPLN. INFO.:										000-					0000		
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AB The present invention relates to pro-apoptotic fragments of the Dengue virus pRM and E glycoproteins, methods of screening for mols. capable of inducing apoptosis and methods of inducing apoptosis in a cell. The M, prM and E proteins of DEN-1 or DEN-2, and monoclonal antibodies can be used for diagnostic and therapeutic agents against Flavivirus infection and cancer.

L19 ANSWER 7 OF 14 MEDLINE ON STN ACCESSION NUMBER: 2000461004 MEDLINE

DUPLICATE 5

DOCUMENT NUMBER: PubMed ID: 10964773

TITLE: Determinants in the envelope E protein and viral RNA

helicase NS3 that influence the induction of apoptosis in

response to infection with dengue type 1 virus.

AUTHOR: Duarte dos Santos C N; Frenkiel M P; Courageot M P; Rocha C

F; Vazeille-Falcoz M C; Wien M W; Rey F A; Deubel V;

Despres P

CORPORATE SOURCE: Departmento de Bioquimica e Biologia Molecular, Laboratorio

de Expressao e Regulacao Genica, Rio de Janeiro, R.J.,

Brazil.

SOURCE: Virology, (2000 Sep 1) Vol. 274, No. 2, pp. 292-308.

Journal code: 0110674. ISSN: 0042-6822.

PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

OTHER SOURCE: GENBANK-AF226686; GENBANK-AF226687

ENTRY MONTH: 200009

ENTRY DATE: Entered STN: 5 Oct 2000

Last Updated on STN: 5 Oct 2000 Entered Medline: 25 Sep 2000

One mechanism by which dengue (DEN) virus may cause cell death AB is apoptosis. In this study, we investigated whether the genetic determinants responsible for acquisition by DEN type 1 (DEN-1) virus of mouse neurovirulence interfere with the induction of apoptosis. Neurovirulent variant FGA/NA dld was generated during the adaptation of the human isolate of DEN-1 virus strain FGA/89 to grow in newborn mouse brains and mosquito cells in vitro [Despres, P. Frenkiel, M. -P. Ceccaldi, P.-E. Duarte Dos Santos, C. and Deubel, V. (1998) J. Virol., 72: 823-829]. Genetic determinants possibly responsible for mouse neurovirulence were studied by sequencing the entire genomes of both DEN-1 viruses. Three amino acid differences in the envelope E protein and one in the nonstructural NS3 protein were found. The cytotoxicity of the mouse-neurovirulent DEN-1 variant was studied in different target cells in vitro and compared with the parental strain. FGA/NA dld was more pathogenic for mouse neuroblastoma cells and attenuated for human hepatoma cells. Changes in virus replicative functions and virus assembly may account, in a large part, for the differences in the induction of apoptosis. Our data suggest that identified amino acid substitutions in the envelope E protein and viral RNA helicase NS3 may influence DEN-1 virus pathogenicity by altering viral growth. Copyright 2000 Academic Press.

L19 ANSWER 8 OF 14 MEDLINE ON STN
ACCESSION NUMBER: 2005316177 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15855154

TITLE: Dendritic cell-specific in

Dendritic cell-specific intercellular adhesion molecule 3-grabbing non-integrin (DC-SIGN)-mediated enhancement of

dengue virus infection is independent of DC-SIGN

internalization signals.

AUTHOR: Lozach Pierre-Yves; Burleigh Laura; Staropoli Isabelle;

Navarro-Sanchez Erika; Harriague Julie; Virelizier

Jean-Louis; Rey Felix A; Despres Philippe; Arenzana-Seisdedos Fernando; Amara Ali

CORPORATE SOURCE: Unite d'Immunologie Virale, Institut Pasteur Paris, 25-28,

rue du Dr Roux, 75724 Paris Cedex 15, France.

SOURCE: The Journal of biological chemistry, (2005 Jun 24) Vol.

280, No. 25, pp. 23698-708. Electronic Publication:

2005-04-26.

Journal code: 2985121R. ISSN: 0021-9258.

PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 200509

ENTRY DATE: Entered STN: 21 Jun 2005

Last Updated on STN: 30 Sep 2005 Entered Medline: 29 Sep 2005

AB Dengue virus (DV) is a mosquito-borne flavivirus that causes hemorrhagic fever in humans. In the natural infection, DV is introduced into human skin by an infected mosquito vector where it is believed to target immature dendritic cells (DCs) and Langerhans cells (LCs). We found that DV productively infects DCs but not LCs. We show here that the interactions between DV E protein, the sole mannosylated glycoprotein present on DV particles, and the C-type lectin dendritic cell-specific intercellular adhesion molecule 3-grabbing non-integrin (DC-SIGN) are essential for DV infection of DCs. Binding of mannosylated N-glycans on DV E protein to DC-SIGN triggers a rapid and efficient internalization of the viral glycoprotein. However, we observed that endocytosis-defective DC-SIGN molecules allow efficient DV replication, indicating that DC-SIGN endocytosis is dispensable for the internalization step in DV entry. Together, these results argue in favor of a mechanism by which DC-SIGN enhances DV entry and infection in cis. We propose that DC-SIGN concentrates mosquito-derived DV particles at the cell surface to allow efficient interaction with an as yet unidentified entry factor that is ultimately responsible for DV internalization and pH-dependent fusion into DCs.

L19 ANSWER 9 OF 14 MEDLINE ON STN
ACCESSION NUMBER: 2000057956 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10590151

TITLE: Alpha-glucosidase inhibitors reduce dengue virus

production by affecting the initial steps of virion

morphogenesis in the endoplasmic reticulum.

AUTHOR: Courageot M P; Frenkiel M P; Dos Santos C D; Deubel V;

Despres P

CORPORATE SOURCE: Unite des Arbovirus et Virus des Fievres Hemorragiques,

Institut Pasteur, 75724 Paris, France.

SOURCE: Journal of virology, (2000 Jan) Vol. 74, No. 1, pp. 564-72.

Journal code: 0113724. ISSN: 0022-538X.

PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 200001

ENTRY DATE: Entered STN: 24 Jan 2000

Last Updated on STN: 24 Jan 2000 Entered Medline: 10 Jan 2000

AB We report that endoplasmic reticulum alpha-glucosidase inhibitors have antiviral effects on dengue (DEN) virus. We found that glucosidase inhibition strongly affects productive folding pathways of the envelope glycoproteins prM (the intracellular glycosylated precursor of M [membrane protein]) and E (envelope protein): the proper folding of prM bearing unprocessed N-linked oligosaccharide is inefficient, and this causes delayed formation of prME heterodimer. The complexes formed between incompletely folded prM and E appear to be unstable, leading to a nonproductive pathway. Inhibition of alpha-glucosidase-mediated N-linked oligosaccharide trimming may thus prevent the assembly of DEN virus by affecting the early stages of envelope glycoprotein processing.

Franco Salvoza 10/608,029.

ANSWER 10 OF 14 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on

STN

ACCESSION NUMBER: 2006:423308 BIOSIS DOCUMENT NUMBER: PREV200600423415

Comparative mechanistic studies of de novo RNA synthesis by TITLE:

flavivirus RNA-dependent RNA polymerases.

Selisko, Barbara; Dutartre, Helene; Guillemot, Jean-Claude; AUTHOR (S):

Debarnot, Claire; Benarroch, Delphine; Khromykh, Alexander;

Despres, Philippe; Egloff, Marie-Pierre; Canard,

Bruno [Reprint Author]

CNRS, Case 925,163 Ave Luminy, F-13288 Marseille 9, France CORPORATE SOURCE:

Bruno.Canard@afmb.univ-mrs.fr

Virology, (JUL 20 2006) Vol. 351, No. 1, pp. 145-158. SOURCE:

CODEN: VIRLAX. ISSN: 0042-6822.

DOCUMENT TYPE:

Article English

LANGUAGE: OTHER SOURCE:

GenBank-AF481864; EMBL-AF481864; DDBJ-AF481864

ENTRY DATE:

Entered STN: 23 Aug 2006

Last Updated on STN: 23 Aug 2006

Flavivirus protein NS5 harbors the RNA-dependent RNA polymerase (RdRp) AΒ activity. In contrast to the RdRps of hepaci- and pestiviruses, which belong to the same family of Flaviviridae, NS5 carries two activities, a methyltransferase (MTase) and a RdRp. RdRp domains of Dengue virus (DV) and West Nile virus (WNV) NS5 were purified in high yield relative to full-length NS5 and showed full RdRp activity. Steady-state enzymatic parameters were determined on homopolymeric template poly(rC). The presence of the MTase domain does not affect the RdRp activity. Flavivirus RdRp domains might bear more than one GTP binding site displaying positive cooperativity. The kinetics of RNA synthesis by four Flaviviridae RdRps were compared. In comparison to Hepatitis C RdRp, DV and WNV as well as Bovine Viral Diarrhea virus RdRps show less rate limitation by early steps of short-product fort-nation. This suggests that they display a higher conformational flexibility upon the transition from initiation to elongation. (c) 2006 Elsevier Inc. All rights reserved.

ANSWER 11 OF 14 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN

2002062862 EMBASE ACCESSION NUMBER:

[Pathogenesis of dengue disease and apoptotic TITLE:

death].

LA PATHOGENICITE DU VIRUS DE LA DENGUE ET L'A MORT

CELLULAIRE PAR APOPTOSE.

Courageot M.-P.; Despres P. **AUTHOR:**

P. Despres, U. Arbovirus et Virus Fievres Hemor., Institut CORPORATE SOURCE:

Pasteur, 25, rue du Dr-Roux, 75724 Paris Cedex 15, France.

pdespres@pasteur.fr

Virologie, (2001) Vol. 5, No. 6, pp. 397-407. . SOURCE:

Refs: 39

ISSN: 1267-8694 CODEN: VIROFD

COUNTRY:

France

Journal; General Review

DOCUMENT TYPE: FILE SEGMENT:

004 Microbiology

General Pathology and Pathological Anatomy 005 French

SUMMARY LANGUAGE:

English; French

ENTRY DATE:

LANGUAGE:

Entered STN: 1 Mar 2002

Last Updated on STN: 1 Mar 2002

Dengue (DEN) is the most important vector-borne disease in tropical countries. DEN disease is caused by dengue virus, a member of the flavivirus genus (family Flaviviridae). DEN is one major health concern in humans. DEN virus causes a spectrum of illnesses, ranging from a flu-like disease to DEN hemorrhagic fever, a fulminating illness that can progress to a shock syndrome and death. The pathogenesis of DEN disease is not well understood. Infection of target cells with DEN virus induces apoptosis. Changes in virus life cycle may account for differences in apoptosis induction. Determinants that may be relevant to DEN virus pathogenicity have been identified in the envelope E protein and viral helicase NS3. Intracellular synthesis of DEN envelope glycoproteins prM and E was sufficient to cause cell death. Induction of apoptosis may be linked to the presence of a pro-apoptotic sequence in the C-terminal region of prM.

L19 ANSWER 12 OF 14 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN

ACCESSION NUMBER: 2005-761339 [78] WPIX

DOC. NO. CPI: C2005-232529

TITLE: Use of recombinant lentiviral vector for vaccination

against infections by Flaviviridae, e.g. West Nile virus,

dengue, yellow fever and hepatitis C.

DERWENT CLASS: B04 C06 D16

INVENTOR(S): CHARNEAU, P; DESPRES, P; FRENKIEL, M P; TANGY,

F; FRENKIEL, M

PATENT ASSIGNEE(S): (CNRS) CNRS CENT NAT RECH SCI; (INSP) INST PASTEUR;

(CNRS) CENT NAT RECH SCI

COUNTRY COUNT: 111

PATENT INFORMATION:

PATENT NO	KIND DATE	WEEK	LA PG
FR 2870126	A1 20051118	(200578)*	61
WO 2005111221	A1 20051124	(200578)	EN

RW: AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IS IT KE LS LT LU MC MW MZ NA NL OA PL PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KM KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NG NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SM SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION						
FR 2870126	A1	FR 2004-5366	20040517					
WO 2005111221	A1 .	WO 2005-IB1753	20050516					

PRIORITY APPLN. INFO: FR 2004-5366 20040517 AB FR 2870126 A UPAB: 20051205

NOVELTY - Use of a recombinant lentiviral vector (A) to prepare an immunogenic composition for prevention and/or treatment of infections by Flaviviridae, where (A) includes a polynucleotide fragment (I) that encodes at least one protein (II) from a virus of the family Flaviviridae or an immunogenic **peptide** (IIa), of at least 8 amino acids, from (II).

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) (A), As defined, that contains a polynucleotide that encodes at least one structural protein (or fragment) and optionally a non-structural

protein (or fragment);

- (2) cells, preferably eukaryotic, modified by (A);
- (3) method for producing proteins of Flaviviridae and/or their immunogenic fragments or viral pseudoparticles, by culturing cells of (2);
- (4) method of screening for antiviral compounds using the cells of (2);
- (5) method for diagnosing infection by Flaviviridae in a biological fluid by detecting antibody-antigen complex formation with the cells of (2) or pseudoparticles of (3); and
 - (6) kit for methods (4) and (5) that contains the cells of (2). ACTIVITY - Virucide; Hepatotropic; Antiinflammatory.

MECHANISM OF ACTION - Vaccine. Lentiviral vector TRIP Delta U3.CMV-Es(WNV), containing a 1.4 kb cDNA from West Nile virus (WNV), was used to immunize mice, at an intraperitoneal dose of 1 mu g. The anti-WNV antibody titer was 104 after 14 days and 2 plus or minus 105 after 23 days, with titer of antibodies that neutralize 90% of WNV loci of infections 10 and 20, respectively.

USE - (A) Are used to produce immunogenic compositions (vaccines) for treatment and/or prevention of Flaviviridae infections in humans and animals, particularly West Nile virus, dengue, yellow fever and hepatitis C.

Cells transformed with (A) are useful:

- (i) for preparing proteins, or their immunogenic fragments, from Flaviviridae;
 - (ii) in screening for antiviral agents; and
 - (iii) to diagnose Flaviviridae infections.

ADVANTAGE - (A) Induces a strong response; particularly it targets antigen-presenting cells and (I) becomes integrated into the genome, ensuring stable expression in vivo, especially in dendritic cells, eliminating the need for repeated administrations. (A) Is non-replicative; non-tumorigenic; not species restricted and does not require adjuvants. Dwg.0/5

L19 ANSWER 13 OF 14 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN

WPIX ACCESSION NUMBER: 2003-058566 [05]

DOC. NO. NON-CPI: N2003-045379 DOC. NO. CPI: C2003-015061

TITLE:

Identifying stimulators of oligoadenylate synthase family genes, useful as antiviral agents against Flavivirus,

also mutated genes responsible for sensitivity to virus.

DERWENT CLASS: B04 D16 P14

INVENTOR(S): BONHOMME, F; DESPRES, P; DEUBEL, V; FRENKIEL, M

P; GUENET, J L; LUCAS, M; MASHIMO, T; MONTAGUTELLI, X; SIMON, C D; FRENKIEL, M; GUENET, J; SIMON-CHAZOTTES, D

PATENT ASSIGNEE(S):

(INSP) INST PASTEUR; (CNRS) CNRS CENT NAT RECH SCI

COUNTRY COUNT: 100

PATENT INFORMATION:

PATENT	NO	KIND	DATE	WEEK	LA	PG
			- 		. -	_

A2 20021017 (200305) * FR WO 2002081741 93

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW

FR 2823224 A1 20021011 (200305) AU 2002302677 A1 20021021 (200433)

AU 2002302677 A8 20051020 (200615)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2002081741	A2	WO 2002-FR1169	20020404
FR 2823224	A1	FR 2001-4598	20010404
AU 2002302677	A1	AU 2002-302677	20020404
AU 2002302677	A8	AU 2002-302677	20020404

FILING DETAILS:

PATENT NO	KIND	PATENT NO									
AU 2002302677	A1 Based on	WO 2002081741									
AU 2002302677	A8 Based on	WO 2002081741									

PRIORITY APPLN. INFO: FR 2001-4598
AB WO 200281741 A UPAB: 20030121

NOVELTY - Identifying (M1) compounds (I) that can stimulate a gene (II) of the OAS (2'-5'-oligoadenylate synthase) family comprising:

20010404

- (a) inducing expression of the OAS gene in a culture of cells from a non-human mammal (Flvr/Flvr or Flvr/Flvs; indicating resistance or sensitivity to Flavivirus infection);
 - (b) treating cells with test compound; and
- (c) measuring activity of (II) relative to a control, is new. DETAILED DESCRIPTION - Identifying (M1) compounds (I) that can stimulate a gene (II) of the OAS (2'-5'-oligoadenylate synthase) family
- comprising:
 (a) inducing expression of the OAS gene in a culture of cells from a non-human mammal (Flvr/Flvr or Flvr/Flvs; indicating resistance or sensitivity to Flavivirus infection);
 - (b) treating cells with test compound; and
 - (c) measuring activity of (II) relative to a control, is new.
- Step (a) involves addition of interferon (IFN) alpha or beta , or application of calcium stress, particularly addition of EGTA (ethylene glycol tetraacetic acid).

INDEPENDENT CLAIMS are also included for the following:

- (1) genomic mammalian DNA (III), optionally human, corresponding to a locus for resistance to Flavivirus infection;
- (2) evaluating (M2) sensitivity of an individual to Flavivirus infection and/or response to treatment with IFN;
- (3) reagent (IV) for the new method containing specific primers or probes;
- (4) transformed eukaryotic cells (V) containing (III), the corresponding cDNA or encoded proteins;
- (5) non-human transgenic mammals (VI) that include at least one copy of (III) or the corresponding cDNA; and
- (6) non-human transgenic mammals (VII) that contain at least one inactivated allele of an OAS gene.

ACTIVITY - Virucide; Hepatotropic; Antiinflammatory.

Primary rat neurons (from animals homozygous for the Flvs allele) were incubated for 2 hr in medium containing EGTA (causing a 350% increase in transcription of the OAS gene), then tested for infection by the neurovirulent IS-98-ST1 strain of West Nile virus. Treatment with EGTA caused a 50% reduction in the number of cells positive for viral antigen 24 hr after infection.

MECHANISM OF ACTION - Replacement or modulation of OAS activity, loss of which is associated with sensitivity to Flavivirus infection.

USE - Genomic nucleic acids, the corresponding cDNAs (also related vectors and cells containing such vectors), or their encoded proteins, are useful for screening for antivirals for treating Flavivirus infection (claimed). (I) are potentially useful as antiviral agents for treating infections by Flaviviruses (e.g. hepatitis C; dengue; yellow fever and varoious forms of encephalitis). Genomic OAS DNA and derived cDNA, also the encoded proteins, are useful:

(a) for treating Flavivirus infection;

(b) in screening for anti-flavivirus agents, and

(c) for evaluating sensitivity of subjects to Flavivirus infection and their likely response to IFN treatment, e.g. to identify patients at risk of developing severe forms of such infections Dwg.0/17

L19 ANSWER 14 OF 14 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN

ACCESSION NUMBER:

2001-418460 [45] WPIX

DOC. NO. NON-CPI: DOC. NO. CPI:

N2001-309994

C2001-126641

TITLE:

System for recombinant expression of flavivirus envelope proteins, useful in screening for potential antiviral agents, contains protein-encoding sequences and

selection gene.

DERWENT CLASS:

B04 D16 S03

INVENTOR(S):

COURAGEOT, M; DESPRES, P; DEUBEL, V

(INSP) INST PASTEUR PATENT ASSIGNEE(S):

COUNTRY COUNT:

PATENT INFORMATION:

KIND DATE WEEK LA PG PATENT NO -----CA 2290090 A1 20010607 (200145)* FR 17

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE					
CA 2290090	. A1	CA 1999-2290090	19991207					

PRIORITY APPLN. INFO: CA 1999-2290090 19991207

CA 2290090 A UPAB: 20010813 AB

NOVELTY - Inducible expression system (A), for mammalian cells (human or non-human) or insect cells, includes an insert comprising:

- (i) a sequence that encodes at least one flavivirus envelope protein (FEP);
 - (ii) a selection gene; and
- (iii) optionally a gene that encodes a cellular hormone receptor. DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:
 - (1) selection methods using (A); and
- (2) inhibitors (IV) of flavivirus (FV), able to inhibit association of FEP produced in (A).

ACTIVITY - Antiviral.

MECHANISM OF ACTION - Modulating folding of, and interactions between, FEP, particularly by inhibition of alpha -glucosidase which is essential for protein maturation before virion assembly.

USE - (A) is used:

- (i) to test efficiency of potential inhibitors directed against FEP;
- (ii) to test folding and efficiency of association of FEP;
- (iii) to validate inhibitory activity of drugs;

Franco Salvoza 10/608,029

- (iv) for in vivo or in vitro evaluation of the protective capacity of agents that prevent cytotoxicity of FEP; and
- (v) to identify, in vivo or in vitro, cellular genes that are activated in response to FEP.

Inhibitors identified using (A) are potentially useful for treating flavivirus infections, particularly the various forms of dengue fever, yellow fever, hepatitis C and G, or Japanese/tick-borne encephalitis.

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Abb09947 Novel hum
Aab71323 Human GCP
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New isolated and purified ApoptoM peptide comprises 9 amino acids, useful as a vaccine for preventing or treating pathological conditions from nonspecific febrile illnesses to severe hemorrhagic manifestations or
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                                                                                                                                                                                                                                                                                                                                                                                                          The present invention relates to an isolated and purified ApoptoM peptide. The invention is useful as a vaccine for the prevention and treatment of pathological conditions from non-specific febrile illnesses to severe hemorrhagic manifestations, encephalitic syndromes and these pathological conditions are linked to Flavivirus infection or cancers. The invention is also useful in gene therapy. The present sequence is a MI-40/DEN (dengue)-2 (F36) mutant protein.
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                                                                                                                            New isolated and purified ApoptoM peptide comprises 9 amino acids, useful as a vaccine for preventing or treating pathological conditions from non-specific febrile illnesses to severe hemorrhagic manifestations or
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coupled receptor, for use in developing a therapeutic agent for medical
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             30-JUN-2003; 2003US-00608029
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                                    (INSP ) INST PASTEUR
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Matches 8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                     ETWFLRHP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N-PSDB; ADQ25887
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO2004055186-A1.
                                                                                                                                                                                                                                                                                                                                         Sequence 48 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens.
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                                                               Despres P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   treatment
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                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADQ25888;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADQ25888
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The invention provides novel G coupled protein receptor (GPCR) proteins and polynucleotides encoding the same. The novel GPCR (NGPCR) proteins can be expressed by standard recombinant methodology. The NGPCR proteins and polynucleotides are useful for diagnosis, in treatment of diseases, care behavioural disorders, for the detection of mutant GPCRs or inappropriately expressed GPCRX for the diagnosis of disease, and for screening drugs effective in the treatment of the symptomatic or phenotypic manifestations of perturbing the normal function of GPCR in phenotypic manifestations of perturbing the normal function of other care are against a seagents in diagnostic assays, for the identification of other callular gene products related to a GPCR, as reagents in assays for callular gene products related to a GPCR, as reagents in assays for callular gene products related to a GPCR, as reagents in assays for callular gene products related to a GPCR, as reagents in assays for creening compounds that can be used as pharmaceutical reagents for the therapeutic treatment of mental, biological or medical disorders and diseases, and for identifying compounds useful in the therapeutic treatment of obesity, inflammation, immune disorders, diabetes, heart and
                                                                                                                                                                                                                                                                                                       ö
                                                                  The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             G coupled protein receptor; GPCR; NGPCR; cytostatic; anorectic; cancer; antiinflammatory; immunosuppressive; antidiabetic; human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New polypeptide, useful for generation of antibodies and for screening compounds for treatment of mental, biological or medical disorders and diseases, comprises the isolated G coupled protein receptor polypeptide.
                                      The present invention provides the protein and coding sequences of a human guanosine triphosphate-binding protein-coupled receptor (GPCR). sequences are useful for treating diseases related to the abnormality the expression of GPCR, and for developing a therapeutic agent for medical treatment. The present sequence is a protein shown in the exemplification of the invention.
                                                                                                                                                                                                                                                                                                     Gaps
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0
                                                                                                                                                                                                                                                       Length 278;
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                                                                                                                                                                                                                                                     66.7%; Score 6; DB 8;
100.0%; Pred. No. 42;
ive 0; Mismatches
Example 5; SEQ ID NO 16; 104pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ABB07253 standard; protein; 826 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human novel GPCR (NGPCR) protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Wang X,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12-MAY-2000; 2000US-0203875P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11-MAY-2001; 2001WO-US015048
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                                                                                                                                                                                                                                                                                                       6; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2002-114231/15.
N-PSDB; ABA94352.
                                                                                                                                                                                                                                                                                                                                                                                          185 WFLRHP 190
                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 6; Conserv
                                                                                                                                                                                                                                                                                                                                                4 WFLRHP 9
                                                                                                                                                                                                            Sequence 278 AA;
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                                                                                                                                                                                                                                                                                      Human; receptor; GPCR; G protein-coupled receptor; secretin; obesity; cardiovascular disorder; diabetes; infection; HIV; pain; cancer; human immunodeficiency virus infection; anorexia; bulimia; asthma; Parkinson's disease; acute heart failure; hypotension; hypertension; urinary retention; osteoporosis; angina pectoris; myocardial infarction; ulorer; allargy; banjan prostatic hypertrophy; psychosis; neurological disorder; anxiety; schizophrenia; manic depression; delirium; dementia; mental retardation; dyskinesia; Huntington's disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New isolated polynucleotide encoding human secretin-type G protein-coupled receptor (GPCR) polypeptides, useful for preventing or treating diseases associated with GPCR dysfunction, e.g. cardiovascular disease or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The invention relates to an isolated polynucleotide which: (a) encodes a human secretin-type G protein-coupled receptor (GPCR) polypeptide; (b) comprises a sequence appearing as ABX12278 and ABX12279; (c) hybridises under stringent conditions to the polynucleotide in (A) and (B); (d) has a sequence deviating from (A)-(C) due to the degeneration of the genetic code; or represents a fragment, derivative or allelic variation of (A)-(D). Also included are an expression vector containing the above polynucleotide, a host cell containing the above substantially purified human secretin-type GPCR polypeptide, methods of screening for agents which modulate or decrease the activity of a human
 coronary disease, metabolic disorders, and cancer. The present sequence
                                                                                     Gaps
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                                                          Length 826;
                                                                                  0; Indels
                                                                                                                                                                                                                                                                Human secretin type G protein-coupled receptor #2.
                                                          66.7%; Score 6; DB 5; Le
100.0%; Pred. No. 1.1e+02;
tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note= "Encoded by GA"
                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                          ABU07568 standard; protein; 827 AA.
             represents a human NGPCR protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 1; Fig 7; 127pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  03-JUN-2002; 2002WO-EP006031
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26-JUL-2001; 2001US-0307608P
                                                                                                                                                                                                                                        20-MAR-2003 (first entry)
                                                                                   6; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Koehler RH, Smolyar A;
                                                                                                                                                                                                                                                                                                                                                                                      Tourette's syndrome.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2003-140623/13.
N-PSDB; ABX15279.
                                                            Query Match
Best Local Similarity
                                                                                                                            21 WFLRHP 26
                                                                                                          4 WFLRHP 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (FARB ) BAYER AG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                Misc-difference
                                     Sequence 826 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200299106-A2
                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
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                                                                                     Matchee
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secretin-type GPCR, methods of reducing the activity of the human secretin-type GPCR, the identified modulators. The polynucleotide is to useful in preventing, ameliorating, or treating diseases associated with human secretin-type GPCR dysfunction. The polynucleotide may also be used as hybridisation probes or primers, and in diagnostic assays or in gontic testing. The methods are useful in producing and detecting the colynucleotide and polypsptide and in screening for agents that modulate the activity of the human secretin-type GPCR. The expression vector or the reagent is useful in preparing a medicament for modulating the activity of a human secretin-type GPCR. The expression vector or the reagent is useful in preparing a medicament for modulating the cardiovascular disorder, obseity, diabetes, infections (bacterial, viral, fungal and protozoan), HIV (human immunodeficiency virus) infection, candiovascular disorder, obseity, diabetes, infection, osteoporosis, andina pectoris, wocardial infarction, unimary retention, osteoporosis, andina pectoris, myocardial infarction, unimary retention, osteoporosis, andina pectoris, manic depression, delirium, dementia, mental retardation, descretin type GPCR of the invention
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits and to assess
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human, chromosome mapping, gene mapping, gene therapy, forensic, food supplement, medical imaging, diagnostic, genetic disorder.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.08;
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23-AUG-2000; 2000US-00649167.
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N-PSDB; AAS74134.
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Matches 6; Conserv
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ABG09947
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in diagnostics as expressed sequence tags for identifying expressed genes. (I) is useful in gene therapy techniques to restore normal activity of (II) or to treat disease states involving (II). (II) is useful for generating antibodies against it, detecting or quantitating a polypeptide in tissue, as molecular weight markers and as a food of sites expressing (II). (I) and (II) are useful in medical imaging of sites expressing (II). (I) and (II) are useful for treating disorders involving aberrant protein expression or biological activity. The polypeptide and polymucleotide sequences have applications in diagnostics, forensics, gene mapping, identification of mutations responsible for generic disorders or other traits to assess biodiversity and to produce other types of data and products dependent on DNA and amino acid sequences. ABG00010-ABG30377 represent novel human diagnostic amino acid sequences of the invention. Note: The sequence data for this patent did not appear in the printed specification, but was obtained in electronic format directly from WIPO at the inventor of produce of the inventor of precipilitation, but was obtained in electronic format directly from WIPO at the inventor of precipilitation, but was obtained in the two obtained in the inventor of the invent
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      66.7%; Score 6; DB 4; Length 904; 100.0%; Pred. No. 1.2e+02; ive 0; Mismatches 0; Indels
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23-FEB-2001; 2001US-0271215P.
08-MAR-2001; 2001US-0274551P.
30-MAR-2001; 2001US-0278507P.
02-APR-2001; 2001US-0280597P.
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Matches 6; Conservative
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Kallick DA, Gandhi AR,
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Khan FA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  156 WFLRHP 161
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 904 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200263004-A2.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAB71323;
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                                                                                                                                      This invention describes novel polypeptides which have anti-HIV, antiparkinsonian, hepatotropic, cytostatic, neuroprotective, antiparkinsonian, hepatotropic, laxative, cerebroprotective, antiinflammatory, virucide, antibacterial, fungicide and protozoacide activity. The products of the invention are useful for treating a disease or condition associated with decreased expression or over expression of functional G-protein coupled receptors (GCREC), while antibodies generated against the polypeptide of the invention are useful for diagnosing a condition or disease associated with the expression of GCREC e.g. arteriosclerosis, cirrhosis, cancer, stroke, Alzheimer's disease, Parkinson's disease, Crohn's disease, stroke, Alzheimer's disease, Parkinson's disease, Crohn's disease, The compounds described in the invention can be used for gene therapy. AAF88627 described in the disclosure of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cytostatic; antinflammatory; hepatotropic; nephrotropic; dermatological; antiathritic; antiasthmatic; antidiabetic; hypotensive; antiulcer; antilitemic; antiateriosclerotic; notropic; neuroprotective; anorectic; immunomodulaic; uropathic; antiinfertility; G-protein coupled receptor; GPCR, GPCR185; GPCR185; GPCR187; GPCR189; GPCR223; GPCR223; hepatitis; nephritis; dermatitis; pancreatitis; rheumatoid arthritis; osteoarthritis; atopic dermatitis; asthma; diabetes; hypertension; inflammatory bowel disease; gastric ulcer; arteriosclerosis; hyperlipemia; Alzheimer's disease; dementia; obesity; pulmonary fibrosis; renal fibrosis; immune deficiency; infertility; urinary blockage; cancer.
New human G-protein coupled receptors (GCREC), useful for diagnosing or treating a disease or condition associated with decreased expression or over expression of functional GCRECs e.g. cancer, Alzheimer's and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         G-protein coupled receptor proteins, genes encoding them and antibodies
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                                                                                                      Claim 63; Page 160-163; 239pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADE34415 standard; protein; 953 AA.
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14-MAY-2002; 2002JP-00138013.
28-FEB-2003; 2003JP-00054663.
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Best Local Similarity 100.
Matches 6,0 Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 924 AA;
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and polynucleotides encoding the same. The novel GPCR (NGPCR) proteins can be expressed by standard recombinant methodology. The NGPCR proteins and polynucleotides are useful for diagnosis, in treatment of diseases, drug screening, clinical trial monitoring, for treatment of physiological or behavioural disorders, for the detection of mutant GPCRs or inappropriately expressed GPCRX for the diagnosis of disease, and for screening drugs effective in the treatment of the symptomatic or phenotypic manifestations of perturbing the normal function of GPCR in the body. The NGPCR proteins are useful for the generation of antibodies, as reagents in diagnostic assays, for the identification of other screening compounds that can be used as pharmaceutical reagents for the charapeutic treatment of mental, bhological or medical disorders and diseases, and for identifying compounds useful in the therapeutic creatment of obesity, inflammantion, immune disorders, diabetes, heart and cornary disease, metabolic disorders, and cancer. The present sequence creaments a human NGPCR protein

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The invention relates to G-protein coupled receptor proteins of human origin. These proteins include GPCR185, GPCR187, GPCR187, GPCR189, GPCR222 and GPCR223. Proteins of the invention are used in the creatment and prevention of diseases associated with inflammation.

Creatment and prevention of diseases associated with inflammation, angiogenesis and tissue neogenesis, including hepaticis, nephritis, angiogenesis and tissue neogenesis, including hepaticis, nephritis, atopic dermatitis, asthma, diabetes, hypertension, inflammatory bowel disease, camentia, obesity, pulmonary fibrosis, renal fibrosis, immune deficiency, infertility, utinary blockage and cancer (such as cancer of the brain, confertility, worder, booked and cancer (such as cancer of the brain, confertility, womb or rectum). Primers of the invention are devised and synthesised based on G-protein coupled receptor consensus sequences and used for 5'-RACE (rapid amplification of CDNA ends) and 3'-RACE amplification of human CDNA derived from adrendl and visual cortex RNA. Sequences given in ADE34534-ADE34331 represent human G-protein coupled creceptor consensus sequences consensus contex RNA.
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recognizing them for treatment and diagnosis of cancer, inflammatory and gastrointestinal disorders.
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                                                                                                          Example; SEQ ID NO 35; 274pp; Japanese.
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Best Local Similarity 100..
Lag 6; Conservative
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ABB07252
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; G protein-coupled; receptor; hTGR21; central nervous disease; endocrine disease; metabolic disease; cancer; inflammation; nootropic; circulatory disorder; disorder; digestive disorder; immune system disorder; infection; gene therapy; neuroprotective; antiinflammatory; immunomodulator; cardiant; antimicrobial; cytostatic; gene therapy; hTGR21-1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human kidney-originated G protein-coupled receptor protein hTGR21 and encoding DNA, for developing drugs to treat e.g. central nervous diseases, endocrine diseases, inflammations and diseases of digestive
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                                                                                                                                                                                                                                                                                                                                                                                            AAU99808 standard; protein; 994 AA.
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13-APR-2001; 2001JP-00115916.
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                                                                                                                                                                                                                                                                               6; Conservative
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                                                                                                                                                                                                                             Sequence 994 AA;
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New polypeptide, useful for generation of antibodies and for screening compounds for treatment of mental, biological or medical disorders and diseases, comprises the isolated G coupled protein receptor polypeptide.

Turner CA;

Gerhardt B,

Walke DW,

Wang X,

Hu Y, Nepomnichy B, WPI; 2002-114231/15. N-PSDB; ABA94351.

12-MAY-2000; 2000US-0203875P. 11-MAY-2001; 2001WO-US015048

(LEXI-) LEXICON GENETICS INC

The invention provides novel G coupled protein receptor (GPCR) proteins

Claim 8; Page 78-80; 85pp; English.

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screened compounds are useful for developing drugs to treat central nervous diseases, endocrine diseases, metabolic diseases, cancer, inflammations, and diseases of the circulatory, respiratory, digestive and immune systems, and infections, and in gene therapy. This is the amino acid sequence of the human G protein-coupled receptor hTGR21-1, a novel protein isolated from human kidney
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                                                                                                                                                                                                                                  Gaps
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100.0%; Pred. No. 1.3e+02;
ive 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                 ADE34425 standard; protein; 994 AA.
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14-MAY-2002; 2002JP-00138013
28-FEB-2003; 2003JP-00054663.
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                                                                                                                                                                                                          Best Local Similarity 100.
Matches 6; Conservative
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ADE34425
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Transgenic mouse; neurological disorder; adreanly diagnosis;
transgenic mouse; neurological disorder; adreanly diand disorder;
colon disorder; intestinal disorder; adreanly disorder;
colon disorder; blood disorder; immune disorder; bone disorder;
joint disorder; metabolic disorder; mutritive disorder; cancer;
W kidney disorder; liver disorder; nutritive disorder; cancer;
W voary disorder; uterus disorder; prostate disorder; testis disorder;
which disorder; thyroid disorder; prostate disorder; spleen disorder;
thymus disorder; thyroid disorder; mutiparkinsonian; antimanic;
thymus disorder; antihflammatory; vasotropic; antianginal; antiarrhythmic;
W cytostatic, antihflammatory; vasotropic; antianginal; antiarrhythmic;
w virucide; hepatotropic; antibacterial; antianlemic; antiseborrhoeic;
W dermatological; antiulcer; antihhytoid; antiallergic; anorectic;
w immunosuppressive; nephrotropic; gene therapy; GPCR modulator; human;
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infertility, urinary blockage and cancer (such as cancer of the brain, neck, tongue, lung, breast, pancreas, stomach, colon, duodenum, prostate, bladder, ovary, womb or rectum). Primers of the invention are devised and synthesised based on G-protein coupled receptor consensus sequences and used for 5'-RACE (rapid amplification of CDNA ends) and 3'-RACE sequences given in ADB34534-ADB34533 represent human G-protein coupled receptor proteins, genes encoding them, and primers for the amplification of these sequences.
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                                                                                                                                                                                                                                    66.7%; Score 6; DB 7; Length 994; 100.0%; Pred. No. 1.3e+02; ive 0; Mismatches 0; Indels
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Pavlova MN, Vassilatis D,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human novel GPCR PGR23, SEQ ID NO:76.
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Best Local Similarity 100.0%
Matches 6; Conservative
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                                                                                                                                                                                                                                                                                                               4 WFLRHP 9
                                                                                                                                                                                                 Sequence 994 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 12
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The invention relates to human and mouse G protein-coupled receptors (GPCRs) and nucleic acids encoding them. The invention also relates to sequences at least 90% identical to the GPCR proteins and nucleic acids of the inventing, preventing or diagnosing diseases associated with GPCRs of the inventing, preventing or diagnosing diseases. CC associated with GPCRs of the invention; a mouse comprising a transgenic compounds useful in the treatment of GPCR-related diseases; a transgenic mouse comprising a GPCR transgene or in an endogenous GPCR gene; cells derived from the trasngenic mice; kits comprising several mice, each of which has a mutation in a different GPCR polymoleotides of the invention. The invention further discloses variants of the GPCR polymoleotides of which has a mutation in the diagnosis, treatment or prevention of a wide variety of be used in the diagnosis, treatment or prevention of a wide variety of diseases including neurological disorders (e.g., Alzheimer's disease, disease including neurological disorders (e.g., Alzheimer's disease, disease including neurological disorders (e.g., Alzheimer's disease, disease, disease); bone and joint disorders (e.g., angina, cardiac arrhythmia or myodrome); cardiovascular disorders (e.g., angina, cardiac arrhythmia or myodrome); cardiovascular disorders (e.g., angina, cardiac arrhythmia or myodrome); bone and joint disorders (e.g., angina, cardiac arrhythmia or myodrome); and disorders (e.g., angina, cardiac, overy, anamemia or leukaemia); immunue disorders; blood disorders (e.g., aucimunue disorders or contained disorders (e.g., aucimunue disorders or contribute, prostace, testis, skin, stomech, pancreas, spoten, thymus and thymus and disorders (e.g., aucimunue disorders or cuteruic, prostace, testis, skin, stomech, pancreas, spoten, thymus and thymus and disorders (e.g., angina, and disorders or the kidney, liver, lung, breast, thymus and clicancers); and every dispersed or secopororish in the printed specification; those sequences not shown were obtained 
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              receptor; GPCR; guanosine triphosphate-binding protein-coupled receptor; human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 8; Length 994; b. 1.3e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (NAAD-) NAT INST ADVANCED IND SCI & TECHNOLOGY. (ADSC-) CENT ADVANCED SCI & TECHNOLOGY INCUBATIO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 66.7%; Score 6; DB 8
100.0%; Pred. No. 1.3
ive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Suwa M, Asai K, Akiyama Y, Aburatani H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADQ25892 standard; protein; 994 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18-DEC-2002; 2002JP-00366417, 03-MAR-2003; 2003JP-00055691.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18-DEC-2003; 2003WO-JP016245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23-SEP-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity 100.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4 WFLRHP 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 994 AA;
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                                                                                                                  The present invention provides the protein and coding sequences of a human guanosine triphosphate-binding protein-coupled receptor (GPCR). The sequences are useful for treating diseases related to the abnormality of the expression of GPCR, and for developing a therapeutic agent for medical treatment. The present sequence is the protein of the invention.
                           New polynucleotide encoding guanosine triphosphate-binding protein-
coupled receptor, for use in developing a therapeutic agent for medical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human, G-protein coupled receptor, GCREC, olfactory, taste sensation, cell proliferative disorder; actinic Keratosis; leukaemia; metabolic; epilepsy, Alzheimer's disease, cardiovascular, hypertension, virucide, angina pectoris; myocardial infarction; gastrointestinal; anorexia; cholecystitis; Crohn's disease, inflammatory; hypotensive; cardiant; acquired immune deficiency syndrome; anaemia; asthma, hepatotropic; diabetes; obesity; infection; transgenic; gene therapy; cytostatic; anticonvulsant; neuroprotective; antiinflammatory; neurological; nootropic; antoimmune; receptor.
                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ding L;
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/note= "Latrophilin/CL-1-like GPS domain"
                                                                                                                                                                                                                                           66.7%; Score 6; DB 8; Length 994; 100.0%; Pred. No. 1.3e+02;
                                                                                                                                                                                                                                                                        0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               17. .1018
/note= "Human mature GCREC-1 protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'note= "Human mature GCREC-1 protein"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human G-protein coupled receptor (GCREC)-1 protein.
                                                                                                                                                                                                                                                                        0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1. .27
/label= Signal_peptide
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/label= Signal_peptide
                                                                                       Claim 1; SEQ ID NO 20; 104pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                               AAE25061 standard; protein; 1018 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Baughn MR, Lu DAM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              08-DEC-2000; 2000US-0254323P.
13-DEC-2000; 2000US-0255564P.
21-DEC-2000; 2000US-025716P.
19-JAN-2001; 2001US-0262848P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     05-DEC-2001; 2001WO-US046659.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
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                                                                                                                                                                                                                                                                           6; Conservative
                                                                                                                                                                                                                                                                                                                                189 WFLRHP 194
                                                                                                                                                                                                                                           Query Match
Best Local Similarity
Matches 6; Conserv
                                                                                                                                                                                                                                                                                                         4 WFLRHP 9
N-PSDB; ADQ25891
                                                                                                                                                                                                               Sequence 994 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO200246230-A2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13-JUN-2002.
                                                            treatment.
                                                                                                                                                                                                                                                                                                                                                                                                                                             AAE25061;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Peptide
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Smolyar A;

Koehler RH,

(FARB) BAYER AG.

WPI; 2003-140623/13

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The invention relates to human G-protein coupled receptors (GCREC) and their corresponding nucleic acids. GCREC is useful in screening for compounds which acts as its agonist or antagonist and is also useful for preparing a polyclonal or monoclonal antibody. GCREC is useful for dentifying a compound that modulates, mimics and/or blocks an olfactory and/or taste sensation. GCREC DNA is useful for assessing toxicity of a cest compound. GCREC and its DNA are useful in the diagnosis, treatment at test compound. GCREC and its DNA are useful in the diagnosis, treatment and prevention of a cell proliferative disorder e.g. actinic keratosis, lenkamaia, etc., a neurological disorder e.g. epilepsy, Alzabeimer's disease, etc., a cardiovascular disorder e.g. epilepsy, Alzabeimer's concravia, cholocysticis, Crohn's disease, etc., an autoimmune/ inflammatory disorder e.g. acquired immune deficiency syndrome, anaemia, asthma, etc., a metabolic disorder e.g. diabetes, obesity, etc., and an inflammatory disorder e.g. diabetes, obesity, etc., and an inflammatory for treating knock out or knock in humanised animals or transgenic animals to model human diseases, and sommation germline gene therapy for treating the above mentioned disorders. The present sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human; receptor; GPCR; G protein-coupled receptor; secretin; obesity; cardiovascular disorder; diabetes; infection; HIV; pain; cancer; human immunodeficiency virus infection; anorexia; bulimia; asthma; Parkinson's disease; acute heart failure; hypotension; hypotension; urinary retention; osteoporosis; angina pectoris; myocardial infarction; ulcer; allorgy; banjan proseatic hypertophy; psychosis; neurological disorder; anxiety; schizophrenia; manic depression; delirium; dementia; mental retardation; dyskinesia; Huntington's disease;
                                                                                               Novel isolated human G-protein coupled receptor protein useful for diagnosing, treating, preventing hypertension, myocardial infarction, anorexia, cholecystitis, anemia, asthma, diabetes, obesity, Alzheimer's
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 5; Length 1018; 1.3e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human secretin type G protein-coupled receptor #1.
Gandhi AR, Thornton M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                66.7%; Score 6; DB 5
100.0%; Pred. No. 1.3
ive 0; Mismatches
                                                                                                                                                                                                     Claim 1; Page 117-120; 136pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABU07567 standard; protein; 1070 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   04-JUN-2001; 2001US-0294998P.
26-JUL-2001; 2001US-0307608P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             03-JUN-2002; 2002WO-EP006031
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Best Local Similarity 100.v.
6; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    is human GCREC-1 protein
Tribouley CM, Tang YT,
                                    WPI; 2002-519657/55.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          213 WFLRHP 218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Courette's syndrome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4 WFLRHP 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 1018 AA;
                                                         N-PSDB, AAD40625
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The invertion relates to an isolated polynucleotide winch: (a) encodes a human secretin-type G protein-coupled receptor (GPCR) polypeptide; (b) comprises a sequence appearing as ABX15278 and ABX15279; (c) hybridises under stringent conditions to the polynucleotide in (A) and (B); (d) has a sequence deviating from (A) (C) due to the degeneration of the genetic code; or represents a fragment, derivative or allelic variation of (A) or code; or represents a fragment, derivative or allelic variation of (A) or code; or represents a fragment, derivative or allelic variation of (A) or code; or represents a fragment, derivative or allelic variation of (A) or substantially purified human secretin-type GPCR polymetleotide, methods of substantially purified human secretin-type GPCR polymetleotide, methods of reducing the activity of the human secretin-type GPCR, the identified modulators, The polymetleotide is secretin-type GPCR, the identified modulators, The polymetleotide is secretin-type GPCR, the identified modulators, The polymetleotide with human secretin-type GPCR, as a secretin-type GPCR dysfunction. The polymetleotide and polymetleotide and in screening for assents as a solution probes or primers, and in diagnostic assays or in copymication probes or primers, and in diagnostic assays or in the activity of the human secretin-type GPCR. The expression vector or the activity of the human secretin-type GPCR. The expression vector or corrections and protozoan), HIV (human immunodeficiency virus) infection, fundal and protozoan), HIV (human immunodeficiency virus) infection, or angina pectoris, morexia, bulimia, asthma, parkinson's disease, acute heart cfallure, hypotension, hypertension, urinary retention, osteoporosis, angina pectoris, myocardial infarction, urinary retention, osteoporosis, and and protozoan), HIV (human immunodeficiency virus) infection, dyskinesias, Huntington's disease and Tourette syndrome). The present corrections descent and and and recretin-type GPCR and in energin presents a human secretin ty
                                                                                                                                                                                                         coupled receptor (GPCR) polypeptides, useful for preventing or treating diseases associated with GPCR dysfunction, e.g. cardiovascular disease or
                                                                                                                                                                                                                                                                                                                                                          invention relates to an isolated polynucleotide which: (a) encodes a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                        New isolated polynucleotide encoding human secretin-type G protein-
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                                                                                                                                                                                                                                                                                                          Claim 1; Fig 2; 127pp; English.
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Best Local Similarity 100...
---a 6; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 1070 AA;
                                                                                                                                      N-PSDB; ABX15278
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                                                                                                                                                                                                                                                           diabetes.
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This invention relates to a novel method of identifying ligands to an orphan receptor protein which comprises transforming cells with DNA encoding a fusion protein of the orphan receptor with a fluorescent protein, so that the fusion protein is expressed in the cells (or cell membranes isolated from them) and contacting the cells with the potential ligand to be tested. A suitable fluorescent protein for incorporation in the fusion protein is green fluorescent protein (GFP), for example GFP-1, wild-type GFP, GFPP or or or protein for the identification of ligands binding to an orphan receptor protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bioinformatics; blood; serum; plasma protein; protein detection; mass spectroscopy; proteomics; glycosylation; diagnosis; cancer; cytostatic, diabetes; antidiabetic; inflammation; antinflammatory; rheumatoid archritis; antiarthritic; antirheumatic; psychiatric disorder; neuroleptic; neurological disease; infection; antimicrobial.
                                                                                                                                                                                                                                                                                                     Transformation of cells with a fusion protein of an orphan receptor protein with a fluorescent protein useful for identification of ligands
                                                                                                                                                                                            Ogi K, Komatsu H, Kawamata Y, Hosoya M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 66.7%; Score 6; DB 7; Length 1232
100.0%; Pred. No. 1.5e+02;
.ive 0; Mismatches 0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                         Disclosure; SEQ ID NO 97; 594pp; Japanese.
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               21-FEB-2003; 2003WO-JP001901.
                                                        22-FEB-2002; 2002JP-00045728.
23-JUL-2002; 2002JP-00213949.
11-OCT-2002; 2002JP-00298237.
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                                                                                                                                                   (TAKE ) TAKEDA CHEM IND LTD
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                                                                                                                                                                                                                                                                                                                                                  to the orphan receptor.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                            Hinuma S, Fujii R,
                                                                                                                                                                                                                                   WPI; 2003-697654/66.
N-PSDB; ADF70576.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1232 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-DEC-2005.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The invention relates to isolated polynucleotide (I) and polypeptide (II) sequences. (I) is useful as hybridisation probes, polymerase chain reaction (PCR) primers, ollgomers, and for chromosome and gene mapping, and in recombinant production of (II). The polynucleotides are also used in diagnostics as expressed sequence tags for identifying expressed genes. (I) is useful in gene therapy techniques to restore normal cativity of (II) as useful in gene therapy techniques to restore normal useful for generating antibodies against it, detecting or quantitating a useful for generating antibodies against it, detecting or quantitating a useful for generating antibodies against it, detecting or quantitating of supplement. (II) and its binding partners are useful in medical imaging of sites expressing (II). (I) and (II) are useful for treating disorders involving aberrant protein expression or biological activity. The polypeptide and polynucleotide sequences have applications in diagnostics, forensics, gene mapping, identification of mutations in diagnostics for genetic disorders or other traits to assess biodiversity responsible for genetic disorders or other traits to assess biodiversity and to produce other types of data and products dependent on DNA and amino acid sequences. ABG00010-ABG30377 represent novel human diagnostic maino acid sequences of the invention. Note: The sequence data for this patent did not appear in the printed specification, but was obtained in electronic format directly from WIPO at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ligand; orphan receptor protein; fusion protein; fluorescent protein; cell expression; green fluorescent protein; GFP; GFP-1; wild-type GFP; GFPuv; Enhanced GFP; EGFP; human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                     New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits and to assess biodiversity.
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es 0; Indels
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100.0%; Pred. No. 1.4
cive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                Claim 20; SEQ ID NO 42014; 103pp; English.
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                                        30-MAR-2001; 2001WO-US008631
                                                                                 31-MAR-2000; 2000US-00540217
23-AUG-2000; 2000US-00649167
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                                                                                                                                                                                               Drmanac RT, Liu C,
                                                                                                                                                                                                                                     WPI; 2001-639362/73.
N-PSDB; AAS75842.
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                                                                                                                                                   (HYSE-) HYSEQ INC
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11-OCT-2001
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Matches
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Gaps

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Length 1232;

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The invention relates to identifying glycopolypeptides in a serum or plasma sample comprising immobilizing derivatized sample
C glycopolypeptides to a solid support, releasing the sample glycopoptide
C fragments from the solid support, adding to the released sample
C glycopoptide fragments standard peptides, and identifying released sample
C glycopeptide fragments that correspond to standard peptides added by mass
CC glycopeptide fragments that correspond to standard peptides added by mass
CC diagnostic markers for a disease, a composition comprising peptides
CC diagnostic markers for a disease, a composition comprising peptides
CC containing the glycosylation sites (AEE35897-AEE39378, where the peptides
CC containing the same cleavage reagent) and a kit comprising peptides containing
CC containing the same cleavage reagent) and a kit comprising peptides
CC diagnostic protein markers. It can a serum or plasma sample. The methods
CC diagnostic protein markers. It can also be used to identify and/or
CC drug toxicity. The methods can also be used to identify and/or
CC validate drug targets and to evaluate drug efficacy, drug dosing, and/or
CC validate drug targets and to evaluate drug efficacy, drug dosing, and/or
CC validate drug targets and to evaluate drug efficacy, drug dosing, and/or
CC validate drug targets and to evaluate drug efficacy, drug dosing, and/or
CC validate of glycosylation of proteins based on the concurrent
CC the same sample. The method allows fast throughput and simplicity. It can
CC particularly advantageous for the analysis of samples, which can be
CC particularly advantageous for the analysis of samples. The present sequence is a human glycopeptide comprising an N-
CC method of the invention.
Identifying glycopolypeptides in a serum or plasma sample, by identifying released sample glycopeptide fragments that correspond to standard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human, respiratory antigen, respiratory disorder, throat disorder,
lung disorder, nose disorder, lung cancer, gene therapy, cytostatic,
anti allergic, anti asthmatic, anti inflammatory, olfactory;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  55.6%; Score 5; DB 10; Length 28; 100.0%; Pred. No. 83; cive 0; Mismatches 0; Indels
                                                    Claim 1; SEQ ID NO 1238; 193pp; English.
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24-FEB-2000; 2000US-0184664P.
02-MAR-2000; 2000US-01853CP.
16-MAR-2000; 2000US-018974P.
17-MAR-2000; 2000US-0190076P.
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Matches 5; Conserv
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14 FLRHP 18
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                           peptides.
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2000US - 0220964P.
2000US - 0224518P.
2000US - 0225213P.
2000US - 0225214P.
2000US - 022526FP.
2000US - 022526P.
2000US - 022526P.
2000US - 022526P.
2000US - 022575P.
2000US - 022575P.
2000US - 022575P.
2000US - 022575P.
2000US-0215135P.
2000US-0216647P.
2000US-0216880P.
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2000US-0227182P.
2000US-0227009P.
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these polypeptides. The sequences of the invention are useful for preventing, treating and/or prognosing disorders related to the respiratory system including throat disorders (e.g. vocal cord paralysis, tonsillities, and laryngitis), lung disorders e.g. pneumonia, allergic disorders e.g. asthma, pleurisy, cystic fibrosis, emphysema, nose disorders and cancers of the respiratory tissues e.g. lung cancer. The polymucleotide sequences of the invention are useful in gene therapy and antisense therapy. AMUTA68-AMUTA75 represent novel human respiratory antisens the sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from MIPO at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              respiratory system antigen; human respiratory system associated polynucleotide; respiratory system associated polynucleotide; respiratory system disorder; throad disorder; vocal cord paralysis; tonsillitis; laryngitis; lung disorder; pneumonia; allergic disorder; asthma; eosinophilic pneumonia; pleurisy; cystic fibrosis; emphysema; histlocytosis; sarcoidosis; nose disorder; rhinitis; sinusitis; neoplasm; cancer; respiratory tissue cancer; throat cancer; lung cancer; cancer of the nose; gene therapy; chromosome identification; forensic; human respiratory system associated protein; human.
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Pred. No. 98;
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2000US-0184664P.
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2000US-0198123P.
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2000US-0216647P.
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2000US-0224518P.
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2000US-0225213P
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Best Local Similarity 100.
Matches 5; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            28 WFLRH 32
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                                                                                                                                                                                                                                                                                                    Sequence 34 AA;
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02-MAR-2000;
16-MAR-2000;
17-MAR-2000;
18-APR-2000;
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30-JUN-2000;
07-JUL-2000;
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14-AUG-2000;
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07-JUN-2000;
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04-FEB-2000;
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              88888888888888888
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Isolated polypeptide for treating, preventing and/ or prognosing disorders related to the respiratory system including respiratory and also for testing and detection e.g. diagnosis.
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    20 - OCT - 2000; 2000US - 0240960P - 20 - OCT - 2000; 2000US - 0241221P - 20 - OCT - 2000; 2000US - 0241764P - 20 - OCT - 2000; 2000US - 0241764P - 20 - OCT - 2000; 2000US - 0241764P - 20 - OCT - 2000; 2000US - 024186P - 20 - OCT - 2000; 2000US - 0241808P - 20 - OCT - 2000; 2000US - 0241808P - 20 - OCT - 2000; 2000US - 024647P - 08 - NOV - 2000; 2000US - 024647P - 08 - NOV - 2000; 2000US - 024647P - 08 - NOV - 2000; 2000US - 024647P - 08 - NOV - 2000; 2000US - 024647P - 08 - NOV - 2000; 2000US - 024647P - 08 - NOV - 2000; 2000US - 024647P - 08 - NOV - 2000; 2000US - 024652P - 08 - NOV - 2000; 2000US - 024652P - 08 - NOV - 2000; 2000US - 024652P - 08 - NOV - 2000; 2000US - 024652P - 08 - NOV - 2000; 2000US - 024652P - 08 - NOV - 2000; 2000US - 024652P - 08 - NOV - 2000; 2000US - 024652P - 08 - NOV - 2000; 2000US - 024652P - 08 - NOV - 2000; 2000US - 024652P - 08 - NOV - 2000; 2000US - 024652P - 08 - NOV - 2000; 2000US - 024921P - 17 - NOV - 2000; 2000US - 024921P - 17 - NOV - 2000; 2000US - 024921P - 17 - NOV - 2000; 2000US - 024921P - 17 - NOV - 2000; 2000US - 024921P - 17 - NOV - 2000; 2000US - 024921P - 17 - NOV - 2000; 2000US - 024921P - 17 - NOV - 2000; 2000US - 024921P - 17 - NOV - 2000; 2000US - 024921P - 17 - NOV - 2000; 2000US - 024921P - 17 - NOV - 2000; 2000US - 024921P - 17 - NOV - 2000; 2000US - 024921P - 17 - NOV - 2000; 2000US - 024921P - 17 - NOV - 2000; 2000US - 024921P - 17 - NOV - 2000; 2000US - 024921P - 17 - NOV - 2000; 2000US - 024921P - 17 - NOV - 2000; 2000US - 024921P - 17 - NOV - 2000; 2000US - 024921P - 17 - NOV - 2000; 2000US - 024921P - 17 - NOV - 2000; 2000US - 024921P - 17 - NOV - 2000; 2000US - 024921P - 17 - NOV - 2000; 2000US - 024921P - 17 - NOV - 2000; 2000US - 024921P - 17 - NOV - 2000; 2000US - 024921P - 17 - NOV - 2000; 2000US - 024921P - 17 - NOV - 2000; 2000US - 024921P - 17 - NOV - 2000; 2000US - 024921P - 17 - NOV - 2000; 2000US - 024921P - 17 - NOV - 2000; 2000US - 024921P - 17 - NOV - 2000; 2000US - 024921P - 17 - NOV - 2000; 2000US - 024921P - 17 - NOV - 2000; 2000US
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01-DEC-2000; 2000US-0250160P.
05-DEC-2000; 2000US-025198P.
05-DEC-2000; 2000US-025198P.
06-DEC-2000; 2000US-025198P.
06-DEC-2000; 2000US-0251856P.
08-DEC-2000; 2000US-0251868P.
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N-PSDB; AAS27953.
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14-SEP-2000; 2000US-0233065P; 21-SEP-2000; 2000US-0233065P; 21-SEP-2000; 2000US-0233065P; 25-SEP-2000; 2000US-023499PP; 25-SEP-2000; 2000US-023499PP; 25-SEP-2000; 2000US-0235844P; 27-SEP-2000; 2000US-0235844P; 27-SEP-2000; 2000US-0235836P; 29-SEP-2000; 2000US-0235836P; 29-SEP-2000; 2000US-0235836P; 29-SEP-2000; 2000US-0235836P; 29-SEP-2000; 2000US-0235836P; 29-SEP-2000; 2000US-0236369P; 29-SEP-2000; 2000US-0236369P; 29-SEP-2000; 2000US-0236369P; 29-SEP-2000; 2000US-0236369P; 29-SEP-2000; 2000US-0236369P; 20-CCT-2000; 2000US-02317039P; 20-CCT-2000; 2000US-02317039P; 20-CCT-2000; 2000US-02317039P; 20-CCT-2000; 2000US-0231703P; 20-CCT-2000; 2000US-0231703P; 20-CCT-2000; 2000US-0231703P; 20-CCT-2000; 2000US-0231703P; 20-CCT-2000; 2000US-0231703P; 20-CCT-2000; 2000US-0231703P; 20-CCT-2000; 2000US-0231808P; 20-
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14-SEP-2000; 2000US-0233063P.
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14-SEP-2000; 2000US-0232398P-
14-SEP-2000; 2000US-0232399P-
14-SEP-2000; 2000US-0232400P-
14-AUG-2000; 24
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2000US - 0246225P 2000US - 0246228P 2000US - 0246528P 2000US - 0246528P 2000US - 0246613P 2000US - 0246611P 2000US - 024920P 2000US - 024920P 2000US - 0249211P 2000US - 0249211P 2000US - 0249211P 2000US - 0249211P 2000US - 0249214P 2000US-0249265P. 2000US-0249297P. 2000US-0249299P. 2000US-0250160P. 2000US-0250391P. 2000US-0251030P. 2000US-0251988P. 2000US-0256719P. 2000US-0251868P. 2000US-0251869P. 2000US-0249300P 2000US-0251479P 2000US-0251856P 2000US-0251990P. 2000US-0254097P. 000US-0251989P 14-FEB-2002; 2002US-00074095 08-NOV-2000; 08-NOV-2000; 08-NOV-2000; 08-NOV-2000; 08-NOV-2000; 08-NOV-2000; 08-NOV-2000; 08-NOV-2000; 08-NOV-2000; 17-NOV-2000; 17-NOV-2000; 17-NOV-2000; 01-05C-2000; 05-05C-2000; 05-05C-2000; 06-05C-2000; 06-05C-2000; 08-05C-2000; 08-05C-2000; 08-05C-2000; 08-05C-2000; 08-05C-2000; 17-NOV-2000; 17-NOV-2000; 17-NOV-2000; 17-NOV-2000; 17-NOV-2000; 17-NOV-2000;

(HUMA-) HUMAN GENOME SCI INC

ŝ Barash Rosen CA, Ruben SM,

WPI; 2003-902033/82. N-PSDB; ADG40857.

Novel respiratory system antigen and polynucleotides encoding the polypeptides, useful for treating diagnosing, treating or preventing tonsillitis, pneumonia, asthma and cystic fibrosis, emphysema, throat cancer.

Claim 11; SEQ ID NO 387; 236pp; English

The invention describes an isolated polypeptide (I) comprising an amino acid sequence that is at least 90% identical to polypeptide fragment of any one of 299 respiratory system antigen sequences (PS) and having biological activity, polypeptide domain or epitope of PS, full-length protein of PS, or variant, allelic variant or species homolog of PS. (I) protein of PS, or variant, allelic variant or species homolog of PS. (I) pathological condition or a susceptibility to a pathological condition in a subject which involves determining the presence or absence of mutation in (II) or determining the presence or amount of expression of (I) in a biological sample and diagnosing a pathological condition based on the result. The human respiratory system associated polynucleotides, the polypeptides encoded by them, and antibodies that immunospecifically bind these polypeptides are useful in diagnosis, treatment, prevention and/or prognosis of disorders of respiratory system such as throat disorders

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2000US-0230437P
2000US-0231242P
2000US-0231243P
2000US-0231244P
2000US-0231244P
2000US-0231444P
2000US-0232080P
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2000US - 023423P
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27-SEP-2000;
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(e.g., vocal cord paralysis, tonsillitis, and laryngitis), lung disorders (e.g., pneumonia), allergic disorders, (e.g., asthma and eosinophilic pneumonia), pleurisy, cystic fibrosis, emphysema, histicoytosis, sarcoidosis, nose disorders (rhinitis and sinusitis), neoplasms and/or cancers of respiratory tissues (e.g., throat cancer, lung cancer, and cancer of the nose). The polynucleotides are useful in gene therapy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      respiratory system-related polypeptide; antiasthmatic; antibacterial; antiinflammatory; cytostatic; antianaemic; antiallergic; gene therapy; pneumonia; lung cancer; cystic fibrosis; asthma; sarcoidosis; rhinitis; anaemia; leukaemia; inflammation; sinustits; chronic obstructive pulmonary disease; infectious disease; human.
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                                                                                                                              7; Length 34;
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                                                                                                                              Query Match
55.6%; Score 5; DB 7;
Best Local Similarity 100.0%; Pred. No. 98;
Matches 5; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                          ADI96923 standard; peptide; 34 AA.
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22-MAR-2000; 2000US-01806464P.
16-MAR-2000; 2000US-0189634P.
17-MAR-2000; 2000US-0189634P.
18-APR-2000; 2000US-0199123P.
19-MAY-2000; 2000US-0199123P.
19-MAY-2000; 2000US-0209467P.
26-JUN-2000; 2000US-0215138P.
11-JUL-2000; 2000US-0215138P.
11-JUL-2000; 2000US-0216886P.
26-JUL-2000; 2000US-0216886P.
26-JUL-2000; 2000US-0216886P.
26-JUL-2000; 2000US-0216890P.
26-JUL-2000; 2000US-0216890P.
26-JUL-2000; 2000US-021689P.
11-JUL-2000; 2000US-021689P.
11-JUL-2000; 2000US-022514P.
14-AUG-2000; 2000US-0225214P.
14-AUG-2000; 2000US-0225254P.
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22-AUG-2000; 2000US-0226681P
22-AUG-2000; 2000US-0226868P
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AD1
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Human; genetic disorder; gene mapping; medical imaging; cancer; neurodegenerative disorder; lymphoid cell disorder; osteoporosis; Parkinson's disease; Alzheimer's disease; bone degenerative disorder; osteoarthritis; periodontal disease; liver fibrosis; viral infection; fungal infection; bacterial infection; autoimmune disease; diabetes; atopic dermatitis.

ABG99963 standard; protein; 52 AA.

Human novel polypeptide #76

17-JAN-2003

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This invention is related to a novel isolated polypeptide, which comprises a human respiratory system-related polypeptide, and the DNA acquence which encodes it. The invention may be useful for the development of compounds with an antiasthmatic, antialacterial, antiinflammatory, cytostatic, antianasthmatic, antialacterial, antiinflammatory, cytostatic, antianasthmatic, antialacterial, addition, the sequences disclosed may be useful for gene therapy. The polypeptide or polynucleotide is useful for treating, preventing or ameliorating a medical condition, for example pneumonia, lung cancer, cystic fibrosis, asthma, sarcoidosis, rhinitis, anaemia, leukaemia, inflammations, sinusitis, chronic obstructive pulmonary disease or infectious diseases. The polypeptic or polynucleotide is also useful for diagnosing any of these diseases or a susceptibility to the disease. The present sequence is that of a human respiratory system associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New human respiratory system-related polypeptide and genes, useful for treating, preventing or diagnosing e.g. pneumonia, lung cancer, cystic fibrosis, asthma, sarcoidosis, rhinitis, leukemia, inflammations or sinusitis.
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                                               17.NOV-2000; 2000US-0249212F.
17.NOV-2000; 2000US-0249213F.
17.NOV-2000; 2000US-0249214F.
17.NOV-2000; 2000US-0249214F.
17.NOV-2000; 2000US-0249216F.
17.NOV-2000; 2000US-024924F.
17.NOV-2000; 2000US-024924F.
17.NOV-2000; 2000US-024924F.
17.NOV-2000; 2000US-0249264F.
17.NOV-2000; 2000US-0249264F.
17.NOV-2000; 2000US-024929F.
17.NOV-2000; 2000US-0249300F.
01.DEC-2000; 2000US-025930F.
01.DEC-2000; 2000US-025930F.
05.DEC-2000; 2000US-025930F.
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New isolated polypeptides and polynucleotides, useful for preventing, treating or ameliorating medical conditions, such as cancer, neurodegenerative disorders, lymphoid cell disorders, bone degenerative

Claim 9; SEQ ID NO 602; 235pp; English.

disorders, and infections.

Ren F;

Tang YT, Zhou P, Goodrich R, Asundi V, Zhang J, Zhao QA, Re Xue AJ, Yang Y, Ma Y, Yamazaki V, Chen R, Wang Z, Ghosh M; Wehrman T, Wang J, Wang D, Drmanac RT;

WPI; 2003-040556/03

N-PSDB; ABX05061

14-MAR-2002; 2002WO-US005109. 15-MAR-2001; 2001US-00810173

WO200274961-A1.

26-SEP-2002

Homo sapiens.

(HYSE-) HYSEQ INC.

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The invention relates to human polynucleotides and the polypeptides they encode. The polynucleotides and polypeptides are useful in diagnostics, concode. The polynucleotides and polypeptides are useful in diagnostics, forensics, gane mapping, medical imaging, identification of mutations are responsible for genetic disorders or other traits, assessing biodiversity and producing many other types of data and products dependent on DNA and amino acid sequences. They are also useful for preventing, treating or ameliorating medical conditions, such as cancer, neurodegenerative disorders, of secoporosis, osteoathatitis, bone degenerative disorders, periodontal disease, liver fibrosis, infections (e.g. viral, fungal or periodontal disease, liver fibrosis, infections (e.g. viral, fungal or sequences ABG99888-ABG9998 and ABU00010-ABU00433 represent human to polypeptides of the invention. Note: The sequence data for this patent is infermation and is not repeased in the printed specification but is based on sequence
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Best Local Similarity
Matches 5; Conserv
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ID AAU4
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Gaps ö

0; Indels Length 34;

55.6%; Score 5; DB 7; 100.0%; Pred. No. 98; ive 0; Mismatches

Best Local Similarity 100. Matches 5, Conservative

Query Match

WFLRH 32 4 WFLRH 8

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RESULT 22

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Propionibacterium acnes predicted ORF-encoded polypeptide #4038.

(first entry)

20-OCT-2003

ABM39362;

Acne vulgaris; antiseborrhoeic; dermatological; antibacterial;

immunostimulant; immune response; vaccine

Propionibacterium acnes

WO2003033515-A1.

24-APR-2003

AAU42843;

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SAPHO syndrome, synovitis, acne; pustulosis, hypertosis, osteomyelitis, uveitis, endophthalmitis, bone; joint; central nervous system; BLISA, inflammatory lesion, acne vulgaris; enrayme linked immunosorbent assay; dermatological; osteopathic; neuroprotectent.
                                 Propionibacterium acnes immunogenic protein #3739.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ABM39362 standard; protein; 60 AA.
                                                                                                                                                         21-APR-2000; 2000US-0199047P.
02-JUN-2000; 2000US-0208841P.
07-JUL-2000; 2000US-0216747P.
                                                                                                                                          20-APR-2001; 2001WO-US012865.
                                                                                                                                                                                                           Persing DH, M
e J, Zhang Y,
                27-FEB-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5; Conservative
                                                                                         Propionibacterium acnes
                                                                                                                                                                                                                                   WPI; 2001-616774/71.
                                                                                                                                                                                          CORI-) CORIXA CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
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                                                                                                                                                                                                                  L'maisonneuve J,
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                                                                                                                                                                                                                                            N-PSDB; AAS59518.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 60 AA;
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                                                                                                         WO200181581-A2.
                                                                                                                                                                                                            Skeiky YAW,
                                                                                                                          01-NOV-2001.
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Best Local S
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ID ABM3
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New Propionibacterium acnes polypeptides and polynucleotides encoding the polypeptide, useful for diagnosing, preventing or treating acne vulgaris, or for stimulating an immune response specific for a P. acnes protein.

Example 1; SEQ ID NO 4038; 1481pp; English.

ä

Maisonneuve JL; Jones R, Carter

Bhatia A, Benson DR,

Persing DH, Lodes MJ,

Zhang Y, Wang S, Jen S, Lod Barth B, Vallieve-Douglass J;

WPI; 2003-381789/36. N-PSDB; ACF64447.

Bhatia A;

Mitcham JL, Wang SS, Jen S, Carter D;

Skeiky YAW, ng S, Jen S

Mitcham JL,

(CORI-) CORIXA CORP.

L1-OCT-2002; 2002WO-US032727. 15-OCT-2001; 2001US-00978825

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Sequences AAU39105-AAU68017 represent Propionibacterium acnes immunogenic polypeptides. The proteins and their associated DNA sequences are used in the treatment, prevention and diagnosis of medical conditions caused by P. acnes. The disorders include SABHO syndrome (synovitis, acne, pustulosis, Mypertosis and osteomyelitis), uveitis and endophthalmitis. P. acnes is also involved in infections of bone, joints and the central nervous system, however it is particularly involved in the inflammatory lesions associated with acne vulgaris. A method for detecting the presence or absence of P. acnes in a patient comprises contacting a sample with a binding agent that binds to the proteins of the invention and determining the amount of bound protein in the sample. The polypeptides may be used as antigens in the production of antibodies can be used to downregulate expression and activity of P. acnes polypeptides and therefore treat P. acnes infections. The acnes polypeptides and therefore treat P. acnes infections. The acnes prosesses of the downregulate appression and activity of P. acnes prosesses for example, by enzyme linked immunosorbent assay (ELISA). Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
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Propionibacterium acnes polypeptides and nucleic acids useful for vaccinating against and diagnosing infections, especially useful for treating acne vulgaris.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   55.6%; Score 5; DB 4; Ler 100.0%; Pred. No. 1.6e+02; iive 0; Mismatches 0;
                                                                                                                                                                                                  Example 1; SEQ ID NO 4038; 1069pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ftp.wipo.int/pub/published_pct_sequences
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The invention relates to an isolated polymucleotide (ACF64435-ACF64733)

cncoding a Propionibacterium acnes protein. The invention also relates to polymeptides encoded by the polymucleotides (ABM35624-ABM6435) and to immunogenic fragments of P. acnes polymeptides. The invention additionally encompasses expression vectors and host cells comprising a content of the invention, additionally encompasses expression vectors and host cells comprising a polymeptide of the invention; an invention; fusion proteins comprising a polymeptide of the invention; a method for stimulating an immune response specific for a P. acnes polymeptide and an isolated T cell population comprising T cells prepared to the invention; and till properties, fusion proteins, T cell populations, or antigen-presenting cells that express the polymeptide); a method and kit of a detecting or determining the presence or absence of P. acnes in a patient; The P. acnes polymeptides, polymercleotides, antibodies, fusion proteins, T cell populations or antigen-presenting cells that express the polymeptides are useful for diagnosing, preventing or treating acnes proteins, T cell populations or antigen-presenting cells that express the protein. The polymucleotides can also be used as probes or primers for uncleic acid hypridisation; he vaccine composition is useful for the crimulation of an immune response against P. acnes, or for treating accorded by an ORF (open creding frame) contained within the P. acnes polymucleotides of the creating frame) contained within the P. acnes polymucleotides of the creating for the printed specification, but was obtained in electronic format directly the print of the printed specification, but was obtained and the for the printed specification, but the printed specification, but the printed specification, but the printed specification, the printed specification, but the pri
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2000US-0233065P
2000US-023423P
2000US-023494P
2000US-023499P
2000US-0235484P
2000US-0235484P
2000US-0235434P
2000US-0235434P
2000US-0235436P
2000US-023636P
2000US-023636P
2000US-023636P
2000US-023636P
2000US-023636P
2000US-023636P
2000US-023636P
2000US-023636P
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2000US - 0240960P
2000US - 024178EP
2000US - 024178FP
2000US - 024186P
2000US - 0241809P
2000US - 0241809P
2000US - 0241806P
2000US - 0241806P
2000US - 0246474P
2000US - 0246474P
2000US - 0246474P
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2000US-0246478P.
2000US-0246523P.
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2000US-0246525P.
2000US-0246526P.
2000US-0246527P.
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2000US-0246532P
2000US-0246610P
2000US-0246611P
2000US-0246611P
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2000US-0249210P.
2000US-0249211P.
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2000US-0249213P.
2000US-0249214P.
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2000US-0250391P
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08-NOV-2000;
08-NOV-2000;
08-NOV-2000;
17-NOV-2000;
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08-NOV-2000;
08-NOV-2000;
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17-NOV-2000;
17-NOV-2000;
17-NOV-2000;
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01-NOV-2000;
08-NOV-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-DEC-2000;
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08-NOV-20
        Human; immune; haematopoietic; immune/haematopoietic antigen; cancer; cytostatic; gene therapy; vaccine; metastasis.
                                                                                                                                                    Human immune/haematopoietic antigen SEQ ID NO:14519.
                                      AAM86926 standard; protein; 62 AA
                                                                                                                                                                                                                                                                                                                                                                                                                         04-FEB-2000; 2000US-018050SBF.
24-FEB-2000; 2000US-018050SBF.
16-MAR-2000; 2000US-018050F.
17-MAR-2000; 2000US-018050F.
18-APR-2000; 2000US-01981SBF.
19-MAY-2000; 2000US-01981SBF.
19-MAY-2000; 2000US-01981SBF.
26-JUN-2000; 2000US-02151SBF.
11-JUL-2000; 2000US-02151SBF.
14-AUG-2000; 2000US-02251SBF.
16-AUG-2000; 2000US-0229SBF.
16-AUG-2000; 2000US-023BBF.
16-AUG-2000; 20
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                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                         WO200157182-A2
                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                07-NOV-2001
                                                                                                                                                                                                                                                                                                                                 09-AUG-2001
                                                                              AAM86926;
RESULT 2 S  

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AAK54951 to AAK64702 encode the human immune/haematopoietic antigen (1) amino acid sequences given in AAM8210 to AAM91921. (1) have cytostatic activity, and can be used in gene therapy and vaccine production. (1) proteins and polynucleotides may be used in the prevention, diagnosis and treatment of diseases associated with inappropriate (1) expression. For example, they may be used to treat disorders associated with decreased expression by rectifying mutations or deletions in a patient's genome that affect the activity of (1) by expressing inactive proteins or to polynucleotides may be used to produce the secreted (1). Additionally, (1) polynuclectics and be not cell and culturing the cell to express the protein. (1) proteins and polynucleotides may be used to prevent, classing and treat immune/haematopoietic-related diseases, especially cancers and cancer metastases of haematopoietic-derived cells. AAK64703 concers and cancer metastases of haematopoietic antigen genomic sequences from the present invention. AAK54921 to AAK5450 and AAM82169 represent invention.
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                                                                                                                                                                                                                                                                                                                                                                         Nucleic acids encoding human immune/hematopoietic antigen polypeptides, useful for preventing, diagnosing and/or treating cancers and metastasis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human cell death protective cDNA clone CNI-00720 ORF3 protein, SEQ:267
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                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 11; SEQ ID NO 14519; 3071pp + Sequence Listing; English
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100.0%; Pred. No. 1.7
:ive 0; Mismatches
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                                                                                                                                                                                                                                                                           Rosen CA, Barash SC, Ruben SM;
                  2000US-0251988P.
                                                     06-DEC-2000; 2000US-0251479P.
08-DEC-2000; 2000US-0251856P.
08-DEC-2000; 2000US-0251868P.
08-DEC-2000; 2000US-0251869P.
                                                                                                                                    -2000; 2000US-0251989P.
                                                                                                                                                                           2000US-0254097P
                                                                                                                                                                                             05-JAN-2001; 2001US-0259678P.
                                                                                                                                                                                                                                    (HUMA-) HUMAN GENOME SCI INC.
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                                                                                                                                                                                                                                                                                                                WPI; 2001-483426/52.
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                                                                                                                                                                                                                                                                                                                                  N-PSDB; AAK59707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 62 AA;
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                05-DEC-2000;
05-DEC-2000;
                                                                                                                                                                         11-DEC-2000;
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Compences AAH84132-AAH84370 represent human nucleic acid sequences which protect against cell death (i.e., apoptosis or necrosis). Sequences or correct against cell death (i.e., apoptosis or necrosis). Sequences or correct against cell death (i.e., apoptosis or necrosis). Sequences or AH8441815. AAH84115. AAH84170, AAH842101, AAH84216, AAH84365.

AAH841813. AAH84115 and AAH84367 represent 10 full-length cDNA clones.

AH8418135. AAH84115 and AAH84367 represent 10 full-length cDNA clones.

AGGS8610-AAG38829 represent the polypeptides encoded by the cell death corrective ORRs. The cell death protective ORNs clones are able to protective ORRs. The cell death protective ORNs clones are able to protective ORRs. The cell death protective ORNs clones associated with cell cath, and to screen for compounds which medulate their activity or severem for compounds which medulate their activity or antibody, a ribozyme, or an antisense molecule, can also be used in the diagnosis and treatment of disorders associated with cell cath, and to screen for compounds which medulate these associated with call cath, related diseases. Such diseases include those associated with the central nervous system including psychiatric or neurological call cath, related diseases. Such diseases include those associated with the cell death-related diseases. Such diseases include those associated with the cell death-related diseases. Such diseases includes neurologenerative disease. The medulators may also be used to treat infections such as ischaemic encephalopathy or cerebral inferction is used to treat infections such as sichaemic encephalopathy or meculation; conditions such as athma or chronic obstructive pulmonary disease; conditions such as anaemia; gastrointestinal conditions such as dermatitis or utticaria; or immune system disorders and disorders such as grawe's disease.

Conditions such as dermatitis or utt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Novel protective sequence polynucleotides and polypeptides, used to identify modulators of their expression and activity, which are used in to treat central nervous system conditions, diseases and disorders.
                        disorder;
benign tumour; anaemia; gastrointestinal disorder; gastritis; ulcerative colitis; liver disease; biliary cirrhosis; kidney disorder. glomerulonephritis; cystitis; endometriosis; endocrine disorder; farave's disease; Hashimoto's thyroiditis; skin condition; dermatitis; urticaria; immune disorder; acquired immunodeficiency syndrome; AIDS.
                                                                                                                                                                                                                                                                                                                                                                                                                                     Katz LC;
                                                                                                                                                                                                                                                                                                                                                                                                                                     Barney S, Thomas MB, Portbury SD, Puranam K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 1; Fig 10C; 325pp; English.
                                                                                                                                                                                                                                                                                                                                                                                      (COGE-) COGENT NEUROSCIENCE INC
                                                                                                                                                                                                                                                                                                                                          99US-00461697.
                                                                                                                                                                                                                                                                                        11-DEC-2000; 2000WO-US033547.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N-PSDB; AAH84265, AAH84268.
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                                                                                                                                                                                               WO200145638-A2.
                                                                                                                                                                                                                                                                                                                                          14-DEC-1999;
                                                                                                                                                  Homo sapiens
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Gaps

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55.6%; Score 5; DB 4; Length 64; 100.0%; Pred. No. 1.7e+02; ive 0; Mismatches 0; Indels

5; Conservative

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Query Match Best Local Similarity Matches 5; Conserva

Propionibacterium acnes immunogenic protein #10928. Skeiky YAW, Persing DH, Mitcham JL, Wang SS, L'maisonneuve J, Zhang Y, Jen S, Carter D; dermatological; osteopathic; neuroprotectant. Example 1; SEQ ID NO 11227; 1069pp; English. AAU50032 standard; protein; 64 02-JUN-2000; 2000US-0208841P. 20-APR-2001; 2001WO-US012865 21-APR-2000; 2000US-0199047P (first entry) Propionibacterium acnes treating acne vulgaris. WPI; 2001-616774/71. (CORI-) CORIXA CORP. 24 WFLRH 28 N-PSDB; AASS9546. Sequence 64 AA; WO200181581-A2 27-FEB-2002 01-NOV-2001 AAU50032; RESULT 27 AA GESTANDER DE LES DE 셤

Sequences AAU39105-AAU68017 represent Propionibacterium acnes immunogenic polypeptides. The proteins and their associated DNA sequences are used in the treatment, prevention and diagnosis of medical conditions caused by P. acnes. The disorders include SAPHO syndrome (synovitis, acne, pustulosis, hypertosis and osteomyelitis), uveitis and endophthalmitis.

C. acnes is also involved in infections of bone, joints and the central nervous system, however it is particularly involved in the inflammatory lesions associated with acne vulgaris. A method for detecting the presence or absence of P. acnes in a patient comprises contacting a maple with a binding agent that binds to the proteins of the invention and determining the amount of bound protein in the sample. The polypeptides may be used as antigens in the production of antibodies speciality for P. acnes proteins. These antibodies can be used to downregulate expression and activity of P. acnes polypeptides and therefore treat P. acnes infections. The antibodies may also be used as therefore treat P. acnes infections. The acnes protein for a presence, for example, by enzyme liked immunoschbar assay. More. The sequence of the acceptance designed to a protein in the production of antibodies and the acres infections. The acnes protein and activity of P. acnes polypeptides and the acceptance of the diagnostic agents for determining P. acnes presence, for example, by enzyme linked immunosorbent assay (ELISA). Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at obtained in electronic format directly fi ftp.wipo.int/pub/published_pct_sequences

55.6%; Score 5; DB 4; Length 64; 100.0%; Pred. No. 1.7e+02; ive 0; Mismatches 0; Indels Query Match 55.6 Best Local Similarity 100. Matches 5; Conservative

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The invention relates to an isolated polymuclectide (ACF64435-ACF64733).

Checoding a Propionibacterium acnes protein. The invention also relates to polymebrides encoded by the polymuclectides (ABM35624-ABM64536) and to immunogenic fragments of P. acnes polypeptides. The invention additionally encompasses expression vectors and host cells comprising a additionally encompasses expression vectors and host cells comprising a comprising a polymeptide of the invention; and invention, antibodies appeared of the invention; a comprising a polymeptide of the invention; a comprising a polymeptide of the invention; a composition (comprising P. acnes polymeptides, via this method; a vaccine composition (comprising P. acnes polymeptides, polymeptides, antibodies, fusion proteins, T cell populations, or antigen-presenting cells that express the polymeptide); a method and kit cfor detecting or determining the development of P. acnes in a cartigen-presenting cells that express the polymeptides, po
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New Propionibacterium acnes polypeptides and polynucleotides encoding the polypeptide, useful for diagnosing, preventing or treating acne vulgaris, or for stimulating an immune response specific for a P. acnes protein.
                                                                                                                                                                                                                                                                                      Propionibacterium acnes predicted ORF-encoded polypeptide #11227.
                                                                                                                                                                                                                                                                                                                                       Acne vulgaris; antiseborrhoeic; dermatological; antibacterial; immunostimulant; immune response; vaccine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Skeiky YAW, Persing DH, Bhatia A, ang S, Jen S, Lodes MJ, Benson DR,
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                                                                                                                                ABM46551 standard; protein; 64 AA.
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Vallieve-Douglass J;
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                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                      Propionibacterium acnes.
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30 FLRHP 34
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Barth B,
                                                                                                                                                                                   ABM46551;
                                                                                                       ABM4655
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                                                                                                                                                                                 SAPHO syndrome; synovitis; acne; pustulosis; hypertosis; osteomyelitis uveitis; endophthalmitis; bone; joint; central nervous system; ELISA; inflammatory lesion; acne vulgaris; enzyme linked immunosorbent assay;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Propionibacterium acnes polypeptides and nucleic acids useful for vaccinating against and diagnosing infections, especially useful for
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Maisonneuve JL; Jones R, Carter D;

Sequence 64 AA;

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Gaps ö

0; Indels

invention. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences

5 FLRHP 9

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in the specification). ABN15762 to ABN27252 encode the human ORFX in the specification). ABN15762 to ABN27252 encode the human ORFX in the specification). ABN15762 to ABN27252 encode the human ORFX in the specification). ABN15762 to ABN27252 encode the human ORFX tracting given in ABN900101 to ABP11300. ORFX proteins are useful for tracting or preventing a pathology associated with an ORFX-associated disorder. ORFX polymucleotide syndrome associated with ORFX-associated disorder. ORFX polymucleotide syndrome associated with ORFX-associated disorder. ORFX polymucleotide recent cancer, hyperproliferative disorders, cirrhosis of liver, psoriasis, benign tumours, keloid, degenerative disorders related to organ transplantation, cardiovascular disorders, disorders related to organ transplantation. Cardiovascular disorders, disorders related to organ transplantation, cardiovascular disorders, disorders, infectious storage disease, various immune deficiencies and disorders, infectious arthritis, autoimmune disorders such as multiple sclerosis, rheumatoid arthritis, autoimmune thyroiditis, myasthenia gravis, graft-versus-host disease and autoimmune inflammatory eye disease. ORFX proteins are also
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              hyperproliferative disorder; psoriasis; benign tumour; haemorrhage; degenerative disorder; osteoarthritis; neurodegenerative disorder; osteoarthritis; neurodegenerative disorder; cardiovascular disease; diabetes mellitus; systemic lupus erythematosus; hypertension; hypothyroidism; cholesterol ester storage disease; immune deficiency; immune disorder; infectious disease; autoimmune disorder; rheumatoid arthritis; autoimmune thyroiditis;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              present invention describes substantially purified human proteins
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cardiovascular disease, neurodegenerative,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human; open reading frame; ORFX; gene therapy; cancer; cirrhosis;
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   Indels
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hyperproliferative disorders and autoimmune disorders.
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Mismatches
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                                                                                                                                                                                                                                                                                                                                     ABP03674 standard; protein; 73 AA.
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29-AUG-2000; 2000US-0228716P.
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Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cell death-associated disorder; central nervous system disorder; psychiatric disorder; neurological disorder; ischaemia-related disorder; stroke; cerebral infarction; ischaemic encephalopathy;
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                                                                                                                                                                                                                                                                                                                                                                                                                    Human cell death protective cDNA clone CNI-00720 ORF2 protein, SEQ:265.
format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                    Gaps
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                                                                            Length 73;
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                                                                            Score 5; DB 5;
Pred. No. 1.96
0; Mismatches
                                                              55.6%; bull 100.0%; Pred 0; N
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N-PSDB; AAH84265, AAH84267.
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                                                                                                                      Conservative
                                                       Query Match
Best Local Similarity
5; Conserve
                                                                                                                                                         5 FLRHP 9
                                                                                                                                                                                                3 FLRHP 7
                                         Sequence 73 AA;
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2000US 0224518P
2000US 0225213P
2000US 0225214P
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2000US 022526F
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2000US-0229287P.
2000US-0229343P.
2000US-0229344P.
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2000US-0225270P.
2000US-0225447P.
2000US-0225757P.
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2000US-0225759P.
2000US-0226279P.
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2000US-0226868P.
2000US-0227182P.
2000US-0227009P.
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                                                                                                                                                                                                                                                                                         14-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  06-SEP-2000;
         used, in the diagnosts and treatment of deachs associated with cell death, and to screen for compounds which modulate their activity or expression. Such modulators, preferably a small organic molecule, an entibozyme, or an antisense molecule, can also be used to treat cell death-related diseases. Such diseases include those associated with the central nervous system including psychiatric or neurological calsorates, especially ischaemia-related conditions such as strokes, and also includes neurodegenerative disease. The modulators may also be thuntington's disease, or Parkinson's disease. The modulators may also be conditions to treat infections such as meningitis, malaria, or trypanosomiasis, vascular diseases such as ischaemic encephalopathy or crebral infarction; eye conditions such as ischaemic encephalopathy or macular diseases.

Conditions such as asthma or chronic obstructive pulmonary disease; conditions such as anaemia; gastrointestinal conditions such as gastritis or ulcerative colitis; liver conditions such as biliary cirrhosis, kidney disorders such as glomerulonephritis; cystitis; endometriosis; endocrine conditions such as glomerulonephritis; cystitis; endometriosis; endocrine conditions such as disease or Hashimoto's thyroiditis; skin conditions such as disease or Hashimoto's thyroiditis; endocrine conditions such as dismatlish or urticaria; or immune system disorders such as glomerulonephritis; cystitis; endometriosis; endocrine conditions used as acquired immunodeficiency syndrome (AlDS). The nucleic acids may additionally be used to generate animal models of cell death-associated disorders. The present septements a cell death protective
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  in the diagnosis and treatment of disorders associated with cell
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Mn. 2e+02;
0; Indels
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100.0%; Pred. No. 2e+
tive 0; Mismatches
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2000US-0190076P.
2000US-0198123P.
2000US-0205515P.
2000US-0209467P.
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2000US-0184664P.
2000US-0186350P.
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Matches 5; Conservative
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19-MAY-2000;
07-JUN-2000;
28-JUN-2000;
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17-MAR-2000;
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AAM99844
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The invention relates to novel excretory system related human polynucleotides (AA198567-AA199503) and the encoded proteins (AAM99594-AAM99913) useful for preventing, treating or ameliorating medical conditions e.g. by protein or gene therappy, especially disorders related to the excretory system. The genes are isolated from a range of human tissues disclosed in the specification. The nucleic acids, proteins, antibodies and (ant)agonists are useful in the diagnosis, treatment and
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20 - OCT - 2000 j 2000US - 024178 TP 20 - OCT - 2000 j 2000US - 0241808 P 20 - OCT - 2000 j 2000US - 0241808 P 20 - OCT - 2000 j 2000US - 0241826 P 10 - NOV - 2000 j 2000US - 0246417 P 10 - NOV - 2000 j 2000US - 0246417 P 10 - NOV - 2000 j 2000US - 0246417 P 10 - NOV - 2000 j 2000US - 0246417 P 10 - NOV - 2000 j 2000US - 0246417 P 10 - NOV - 2000 j 2000US - 0246417 P 10 - NOV - 2000 j 2000US - 0246417 P 10 - NOV - 2000 j 2000US - 024652 P 10 - NOV - 2000 j 2000US - 024652 P 10 - NOV - 2000 j 2000US - 024652 P 10 - NOV - 2000 j 2000US - 024652 P 10 - NOV - 2000 j 2000US - 024652 P 10 - NOV - 2000 j 2000US - 024652 P 10 - NOV - 2000 j 2000US - 024652 P 10 - NOV - 2000 j 2000US - 024652 P 10 - NOV - 2000 j 2000US - 024652 P 10 - NOV - 2000 j 2000US - 024651 P 11 - NOV - 2000 j 2000US - 024920 P 11 - NOV - 2000 j 2000US - 024920 P 11 - NOV - 2000 j 2000US - 024921 P 11 - NOV - 2000 j 2000US - 024921 P 11 - NOV - 2000 j 2000US - 024921 P 11 - NOV - 2000 j 2000US - 024921 P 11 - NOV - 2000 j 2000US - 024921 P 11 - NOV - 2000 j 2000US - 024921 P 11 - NOV - 2000 j 2000US - 024921 P 11 - NOV - 2000 j 2000US - 024921 P 11 - NOV - 2000 j 2000US - 024921 P 11 - NOV - 2000 j 2000US - 024921 P 11 - NOV - 2000 j 2000US - 024921 P 11 - NOV - 2000 j 2000US - 024921 P 11 - NOV - 2000 j 2000US - 024921 P 11 - NOV - 2000 j 2000US - 024921 P 11 - NOV - 2000 j 2000US - 024921 P 11 - NOV - 2000 j 2000US - 024921 P 11 - NOV - 2000 j 2000US - 024921 P 11 - NOV - 2000 j 2000US - 024921 P 11 - NOV - 2000 j 2000US - 024921 P 11 - NOV - 2000 j 2000US - 024921 P 11 - NOV - 2000 j 2000US - 024921 P 11 - NOV - 2000 j 2000US - 024921 P 11 - NOV - 2000 j 2000US - 024921 P 11 - NOV - 2000 j 2000US - 024921 P 11 - NOV - 2000 j 2000US - 024921 P 11 - NOV - 2000 j 2000US - 024921 P 11 - NOV - 2000 j 2000US - 024921 P 11 - NOV - 2000 j 2000US - 024921 P 11 - NOV - 2000 j 2000US - 024921 P 11 - NOV - 2000 j 2000US - 024921 P 11 - NOV - 2000 j 2000US - 024921 P 11 - NOV - 2000 j 2000US - 024921 P 11 - NOV - 2000 j 2000US - 024921 P 11 - NOV - 2000 j 2
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06-DEC-2000; 2000US-025149P.
08-DEC-2000; 2000US-0251868F.
08-DEC-2000; 2000US-0251868F.
08-DEC-2000; 2000US-0251869F.
08-DEC-2000; 2000US-0251889F.
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05-JAN-2001; 2001US-0259678P
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N-PSDB; AAI98817.
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prevention of: (a) cancer, e.g. breast and ovarian cancer and other cancers of the adrenal gland, bone, bone marrow, breast, gastrointestinal tract, liver, lung, or urogenital; (b) immune disorders e.g. Addison's disease, allergies, autoimmune haemolytic anaemia, autoimmune thyroiditis, diabetes mellitus, Crohn's disease, multiple sclerosis, rheumatoid arthritis and ulcerative colitis; (c) cardiovascular disorders such as myocardial ischaemias, (d) wound healing; (e) neurological diseases e.g. cerebral anoxia and epilepsy; and (f) infectious diseases such as viral, bacterial, fungal and parasitic infections. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human; kidney antigen; immunosuppressive; antiarthritic; antirheumatic; antipoliferative; oytostatic; cardiant; vasotropic; cerebroportective; nootropic; neuroprotective; antibacterial; virucide; fungicide; opthalmological; antiallergic; hepatotropic; antidiabetic; antiallergic; hepatotropic; antidiabetic; antibaratic; gene therapy; cancer; immune disorder; anticonvulsant; antiparasitic; gene therapy; cancer; immune disorder; cardiovascular disorder; neurological disease; infection.
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                                                                                                                                                                                                                                   Length 76;
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2000US-0180628P.
2000US-0184664P.
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                                                                                                                                                                                                                                   Query Match 55.6
Best Local Similarity 100.
Matches 5; Conservative
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                                                                                                                                                                                                      Sequence 76 AA;
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18-AAR-2000;
07-JUN-2000;
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28-JUN-2000;
07-JUL-2000;
07-JUL-2000;
11-JUL-2000;
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16-MAR-2000;
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26-JUL-2000;
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14-AUG-2000; 2000US-0225267P.
14-AUG-2000; 2000US-0225268P.
14-AUG-2000; 2000US-0225268P.
14-AUG-2000; 2000US-022547P.
14-AUG-2000; 2000US-0225757P.
14-AUG-2000; 2000US-0225759P.
14-AUG-2000; 2000US-0225759P.
22-AUG-2000; 2000US-022568P.
22-AUG-2000; 2000US-022668P.
22-AUG-2000; 2000US-022668P.
23-AUG-2000; 2000US-0229345P.
01-SEP-2000; 2000US-0229345P.
01-SEP-2000; 2000US-0229345P.
05-SEP-2000; 2000US-0229345P.
06-SEP-2000; 2000US-0229344P.
06-SEP-2000; 2000US-0229344P.
08-SEP-2000; 2000US-0229344P.
08-SEP-2000; 2000US-0221444P.
08-SEP-2000; 2000US-0231244P.
08-SEP-2000; 2000US-0231244P.
08-SEP-2000; 2000US-0231249P.
14-SEP-2000; 2000US-023139P.
14-SEP-2000; 2000US-0232399P.
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26-SEP-2000; 2000US-0235449P.
27-SEP-2000; 2000US-0235449P.
27-SEP-2000; 2000US-0235434P.
29-SEP-2000; 2000US-0235434P.
29-SEP-2000; 2000US-0236369P.
29-SEP-2000; 2000US-0236369P.
29-SEP-2000; 2000US-0236369P.
29-SEP-2000; 2000US-0236369P.
29-SEP-2000; 2000US-0236369P.
29-SEP-2000; 2000US-0236369P.
20-CTT-2000; 2000US-0236369P.
20-CTT-2000; 2000US-0237034P.
20-CTT-2000; 2000US-0237034P.
20-CTT-2000; 2000US-0237039P.
20-CTT-2000; 2000US-0237039P.
20-CTT-2000; 2000US-0237039P.
20-CTT-2000; 2000US-023403P.
20-CTT-2000; 2000US-0241786P.
20-CTT-2000; 2000US-0241809P.
20-CTT-
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14-SEP-2000; 2
14-SEP-2000; 2
14-SEP-2000; 2
21-SEP-2000; 2
21-SEP-2000; 2
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2000US-0246527P.
2000US-0246528P.
2000US-0246609P.
2000US-0246611P.
2000US-0246611P.
2000US-0249207P.
2000US-0249208P.
2000US-0249208P.
2000US-0249211P.
2000US-0249211P. 2000US-0249245P. 2000US-0249264P. 2000US-0249265P. 2000US-024929P. 2000US-0249309P. 2000US-0249300P. 2000US-0250391P. 2000US-0251030P. 2000US-0251988P. 2000US-0256719P. 2000US-0251479P. 2000US-0251856P. 2000US-0251868P. 2000US-0251869P. 2000US-0251869P. 2000US-0251990P 2000US-0254097P 08-NOV-2000; 08-NOV-2000; 08-NOV-2000; 08-NOV-2000; 08-NOV-2000; 08-NOV-2000; 17-NOV-2000; 17 17-NOV-2000; 17-NOV-2000; 17-NOV-2000; 17-NOV-2000;

Rosen CA, Barash SC, Ruben SM (HUMA-) HUMAN GENOME SCI INC

WPI; 2001-488784/53.

N-PSDB; AAI63213

Claim 11; SEQ ID NO 528; 564pp + Sequence Listing; English.

New isolated nucleic acids and polypeptides, useful for diagnosing treating and/or preventing human diseases and disorders.

The invention relates to novel kidney related polynucleotides (AAI62971-AAI63793) and the encoded polypeptides (AAM42417-AAM42691) collectively kands as kidney antigens and the use of such kidney antigens for detecting disorders of the kidney, especially kidney cancer and kidney cancer metastases. The polynucleotides and proteins are also useful for preventing, treating or ameliorating medical conditions e.g. by protein or gene therapy. The genes are isolated from a range of human tissues cisclosed in the specification. The nucleic acids, proteins, antibodies and (ant)agonists are useful in the diagnosis, treatment and prevention of isolosed in the specification. The nucleic acids, proteins, and cand jand, bone marrow, breast, gastrointestinal tract, liver, lung, or urogenital; (b) immune disorders e.g. Addison's disease, allergies, autoimmune haemolytic anaemia, autoimmune thyroiditis, allergies, autoimmune disease, multiple sclerosis, rheumatoid arthritis and ulcerative colitis; (c) cardiovascular diseases such as viral, my cerebral anoxia and epilepsy; and (f) infectious diseases such as viral, bacterial, fungal and parasitic infections. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at

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                                                                                                                                                                                                                                                                                                                                                           Human; ORF; open reading frame; ORFX; drug screening; diagnosis; disease monitoring; cytokine; cell proliferation; cell differentiation; dimense modulation; hamatopoiesis regulation; cell differentiation; angiogenesis; activin; inhibin; chemocactic; chemokinetic; hemostatic; thrombolytic; tumour inhibition; bodily characteristic; fertility; behaviour; cancer; proliferative disorder; neurological disorder; cardiovascular disease; immune system disorder; organ transplantation; tissue growth disorder; tissue regeneration disorder; diabetes mellitus; hypothyroidism; cholesterol ester storage disease; infection; vulnerary; wasotropic; antipporiatic; antidiabetic; cytosteatic; nockropic; neuroprotective; antiatherosclerotic; antidiamatory; thrombolytic; cardiant; hypotensive; antistyroid; antinflammatory; immunomodulator; dermatological; analgesic; virucide; antibacterial; fungicide.
                                                                                               Gaps
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                                                  DB 4; Lens.
No. 28+02;
0; Indels
                                                            Score 5; DB 4;
Pred. No. 2e+0
0; Mismatches
 ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                 Human ORF3835 protein, SEQ ID NO:7670.
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                                                 55.6%; Sc._
100.0%; Pre
                                                                                                                                                                                                                                     ABP34862 standard; protein; 82
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                                                                           Local Similarity 100 es 5; Conservative
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                               Sequence 76 AA;
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cell differentiation, immune modulation, haematopoiesis regulation, tissue growth, angiogenesis, activin or inhibin activity, chemotactic/conferentiationeric activity, thaemostatic activity, thrombolytic activity, cepeptor/ligand, antiinflammatory activity, tumour inhibition activity, receptor/ligand, antiinflammatory activity, tumour inhibition activity, and antiinflective activity, and may also be involved in the determination of bodily characteristics, fertility and behaviour. ORFX proteins.

CC f bodily characteristics, fertility and behaviour. ORFX proteins.

CC mucleic acids and antibodies may be used in the treatment of cancers, other proliferative disorders such as poorlasis and benign tumours, coller proliferative disorders such as epilepsy and Alzheimer's disease, cardiovascular diseases, immune system disorders; disorders related to organ transplantation, disorders of tissue growth and regeneration, disorders mellitus, hypothyroidism, and cholesterol ester storage diseases, and infections diseases caused by viral, bacterial, croarged diseases under infections diseases caused by viral, bacterial, activity and probes, in the detection of ORFX genomic sequences are contained in the detection and cloning of homologous contranscriptes, in the identification and cloning of homologous sequences, in genetic diseases in and in foremsic biology. The ORFX protein, and in drug screening. The ORFX proteins may also be used as immunogens to generate specific antibodies, which are useful in the cimmunogens to generate specific antibodies, which are useful in the cimmunogens to generate specific antibodies, which are useful in the cimmunogens to generate specific antibodies, which are useful in the cimmunogens to generate specific antibodies, which are useful in the
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100.0%; Pred
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28-APR-2003; 2003US-00425115.
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Best Local Similarity
5; Conserve
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 82 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Viridiplantae
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              28-OCT-2004.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADT58131;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 34
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Propionibacterium acnes polypeptides and nucleic acids useful for vaccinating against and diagnosing infections, especially useful for treating acne vulgaris.

Example 1; SEQ ID NO 12713; 1069pp; English.

Bhatia A;

Mitcham JL, Wang SS, Jen S, Carter D;

Persing DH, M e J, Zhang Y,

L'maisonneuve J,

Skeiky YAW,

2001-616774/71.

N-PSDB; AAS59551.

02-JUN-2000; 2000US-0208841P 07-JUL-2000; 2000US-0216747P

(CORI-) CORIXA CORP

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The invention relates a recombinant DNA construct comprising a polypeptide with any of 5544 and cadd sequences (CDNAs SEQ ID NO: 1-5544) and encoding a polypeptide with any of 5544 and oad a sequences (SEQ ID NO: 5545-11088) The CDNAs and proteins are from corn, sowbean, Arabidopsis, wheat and rape but the specification does not indicate which sequences is derived from which organism. Also included is a method of producing a plant having an improved property, comprising transforming a plant with a recombinant DNA construct comprising a promoter region of the areas of the property is selected from improving plant cold tolerance, for functional in a plant cell operably joined to a polymucleotide encoding a plant. The property is selected from improving plant cold tolerance, for manipulating growth rate in plant cells by modification of the cell cycle pathway, for improving plant disease, for glactomanan production, for production of plant growth requisions, for increasing the rate of nomologous recombination in plants, for lightin production, for improving plant tolerance to extreme osmotic conditions, for improvement by modification of carbohydrate, hitrogen or phosphorus use and/or uptake and for yield improvement by providing improvement by modification of carbohydrate, hitrogen or phosphorus use and/or uptake and for yield improvement by providing improved plant growth and compositions of carbohydrate, hitrogen or phosphorus use and/or uptake and for yield improvement by providing improved plant growth and compositions of the present invention are useful in the field of biochemistry and encode a plant transcription factor. The methods and compositions of the present invention are useful in the field of biochemistry and improved and a present expense or pathogens. The pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sequences of the invention. Note: The sequence is one of the 5544 plant protein not form part of the printed specification, but was obtained in sequence formit format directly from USPTO at sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SAPHO syndrome; synovitis; acne; pustulosis; hypertosis; osteomyelitis; uveitis; endophthalmitis; bone; joint; central nervous system; ELISA; inflammatory lesion; acne vulgaris; enrayme linked immunosorbent assay; dermatological; osteopathic; neuroprotectant.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 85;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Propionibacterium acnes immunogenic protein #12414.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 8; Leng
o. 2.2e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               55.6%; Score 5; DB 8
100.0%; Pred. No. 2.2
:ive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAU51518 standard; protein; 86 AA.
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Best Local Similarity 100.000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14 FLRHP 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5 FLRHP 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 85 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO200181581-A2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 35
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Sequences AAU39105-AAU68017 represent Propionibacterium acnes immunogenic polypeptides. The proteins and their associated DNA sequences are used in the treatment, prevention and diagnosis of medical conditions caused by P. acnes. The disorders include SAPHO syndrome (synovitis, acne, pustulosis, hypertosis and osteomyelitis), uveitis and endophthalmitis. P. acnes is also involved in infections of bone, joints and the central nervous system, however it is particularly involved in the inflammatory lesions associated with acne vulgaris. A method for detecting the presence or absence of P. acnes in a patient comprises contacting a sample with a binding agent that binds to the proteins of the invention and determining the amount of bound protein in the sample. The polypeptides may be used as antigens in the production of antibodies oplypeptides may be used as antigens in the production of antibodies of polypeptides and activity of P. acnes polypeptides and contacting therefore treat P. acnes infections. The antibodies may also be used as diagnostic agents for determining P. acnes presence, for example, by enzyme linked immunosorbent assay (ELISA). Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                      immunogenic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Propionibacterium acnes predicted ORF-encoded polypeptide #12713.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Acne vulgaris; antiseborrhoeic; dermatological; antibacterial; immunostimulant; immune response; vaccine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 4; Length 86; . 2.2e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 55.6%; Score 5; DB 4 Best Local Similarity 100.0%; Pred. No. 2.2 Matches 5; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             tp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABM48037 standard; protein; 86 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11-OCT-2002; 2002WO-US032727.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15-OCT-2001; 2001US-00978825.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20-OCT-2003 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Propionibacterium acnes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5 FLRHP 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO2003033515-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 86 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 FLRHP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     24-APR-2003.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ABM48037;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 36
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(CORI-) CORIXA CORP

20-APR-2001; 2001WO-US012865 21-APR-2000; 2000US-0199047P

01-NOV-2001

28-APR-2003; 2003US-00425114. 06-MAY-1999; 99US-00304517. 05-NOV-2001; 2001US-00985678.

US2004034888-A1

19-FEB-2004.

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The invention relates to an isolated polynuclectide (ACF64435-ACF64733)
encoding a Propionibacterium acnes protein. The invention also relates to
polypeptides enroaded by the polynucleotides. The invention
immunogenic fragments of P. acnes polypeptides. The invention
additionally encompasses expression vectors and host cells comprising a
polymenteotide of the invention; antibodies against polypeptides of the
invention; fualon proteins comprising a polypeptide of the invention;
and an isolated T cell population comprising T cells prepared
constitutions this method; a vaccine composition (comprising P. acnes polypeptides,
polymenteotides, antibodies, fusion proteins, T cell populations, or
antigen-presenting cells that express the polypeptide); a method and kit
confecting or determining the presence or absence of P. acnes in a
patient; and a method for inhibiting the development of P. acnes in a
patient; and a method for inhibiting the development of P. acnes in a
patient; and a method for inhibiting the development of P. acnes in a
patient; and a method for inhibiting the development of P. acnes in a
patient; and a method for inhibiting the development of P. acnes in a
confecting or determining an information or treating acnes
confecting or define to a subspective, polymelectides, antibodies, fusion
proteins, T cell populations or antigen-presenting or treating acnes
convigation. The polymuclectides can also be used as probes or primers for
nucleic acid hybridisation. The vaccine composition is useful for the
convolation frame) contained within the P. acnes polymelectides of the
conference represents a polypeptide predicted to be encoded by an ORF (open
conference represents a polypeptide predicted to be encoded by an ORF (open
conference represents a polypeptide predicted to be encoded by an ORF (open
conference represents a polypeptide for this patent did not form part of
invention. Note: The sequence data for this patent did not form part of
the printed specification, but was obtained in electronic format dir
                                                                                                                                                                                                                                   New Propionibacterium acnes polypeptides and polynucleotides encoding the polypeptide, useful for diagnosing, preventing or treating acne vulgaris, or for stimulating an immune response specific for a P. acnes protein.
                              Maisonneuve JL;
Jones R, Carter D;
                              Bhatia A,
Benson DR,
                                                                                                                                                                                                                                                                                                                                                       Example 1; SEQ ID NO 12713; 1481pp; English.
                              Persing DH,
Lodes MJ,
                           Mitcham JL, Skeiky YAW, Pers
Zhang Y, Wang S, Jen S, Lod
Barth B, Vallieve-Douglass J;
                                                                                                                                                WPI; 2003-381789/36
                                                                                                                                                                           N-PSDB; ACF64480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 86 AA;
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., 0 0; Indels 55.6%; Score 5; DB 6; Length 86; 100.0%; Pred. No. 2.2e+02; ive 0; Mismatches 0; Indels 5; Conservative Query Match Best Local Similarity 5 FLRHP 9 Matches

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Gaps

ADX94950 standard; protein; 89 AA. 21-APR-2005 (first entry) ADX94950;

plant protectant, plant growth regulant, gene therapy, plant, recombinant DNA construct, physical array, plant breeding marker; cold tolerance, heat tolerance, drought tolerance, herbicide tolerance, extreme osmotic condition; pathogen tolerance; pest tolerance; growth rate; cell cycle pathway; disease resistance; galacromannan production; lignin production; plant growth regulator; yield; plant growth; plant development; seed oil; protein yield; protein content. Plant full length insert polypeptide seqid 57614. RESULT 37
ADX94950
XX
AC ADX94
XX
AC ADX94
DT 21-AP
XX
XX
DY 21-AP
XX
XX
XX
COld
KW Cold
KW Cold
KW Galac
KW Ga

Unidentified

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The invention describes a recombinant DNA construct comprising a polynucleotide consisting of a sequence encoding an amino acid sequence available in electronic form from the US patent office at the invention are also useful in physical arrays of molecules and as plant breeding markers. The recombinant DNA construct is useful for improving plant tolerance to cold, heat, drought, heablicides, extreme osmotic conditions, pathogens or pests, for manipulating growth rate in plant cells by modification of the cell cycle pathway, for conferring increased resistance to plant disease, for producing galactomannan, increased resistance to plant disease, for increased resistance to plant disease, for increasing the rate of homologous recombination in plants, for improving yield by modification of photosynthesis or carbohydrate, nitrogen or phosphorus use and/or uptake or by providing improved plant growth and development under at least one carress condition or for modifying seed oil or protein yield and/or content. This is the amino acid sequence of a plant full length insert polypeptide that can be used in the recombinant DNA construct of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                            New recombinant DNA construct, useful for improving plant tolerance to cold, heat, drought, herbicides, extreme osmotic conditions, pathogens or pests, for conferring increased resistance to plant disease, or for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               antiarthritic; antiparkinsonian; neuroprotective; nootropic; immunosuppressive; cytostatic; antipsoriatic; antiinflammatory; antibacterial; antiviral; antifungal; antiparasitic; gene therapy; arthritis; Parkinson's; Alzheimer's; autoimmune disease; cancer; psoriasis; inflammatory bowel disease; infection; bacteria; virus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                            Cao Y;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              55.6%; Score 5; DB 8; Length 89; 100.0%; Pred. No. 2.3e+02; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                            Tabaska JE,
                                                                                                                                                                                                                                                                                                            Zhou Y, Kovalic DK, Screen SE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 1; SEQ ID NO 57614; 15pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADK36992 standard; protein; 90 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Novel human polypeptide SeqID9074.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            06-MAY-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5; Conservative
                                                                                                                                                                                                                                                                                                                                              WPI; 2004-180133/17.
                                                                                                                                                                                                 ZHOU Y.
KOVALIC D K.
                                                                                                                                                                                                                                    SCREEN S E.
TABASKA J E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4 WFLRH 8
                                                                                                                                                                                                                                                                                                                                                                                                                                       improving yield.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 89 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADK36992;
                                                                                                                                                                                                                                    (SCRE/) S
(TABA/) 1
(CAOY/) C
                                                                                                                                                                              (LIUJ/)
(ZHOU/)
                                                                                                                                                                                                                    KOVA/)
                                                                                                                                                                                                                                                                                                              Liu J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
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The invention relates to a substantially purified nucleic acid molecule encoding a nitrite reductase of SEQ ID NO. 11926. Further disclosed is a recombinant DNA construct for expression of a nitrite reductase gene in a plant cell comprising the recombinant DNA construct. The nucleic acid is useful for determining gene expression, identifying mutations in a gene of interest, and for constructing mutations in a gene of interest. Sequences given in records for SEQ IDS 962-16825 represent a group of 7134 Mxycoccus xanthus proteins and peptides. Note: The sequence data for this parent did not form part of the printed specification, but was obtained in electronic format directly from USPTO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           anticonvulsant; nootropic; neuroprotective; cerebroprotective; anti-HIV; antialergic; antiinflammatory; thyromimetic; gene therapy; entering the cell proliferative disorder; endocrine disorder; neurological disorder; immune system disorder; inflammatory disorder; developmental disorder; reproductive disorder; vesicle-trafficking disorder; infection.
                                                                                                                                                                                                                                                                                                                                                                                 New substantially purified Myxococcus xanthus nucleic acid molecule encoding a nitrite reductase, useful for determining gene expression, identifying mutations in a gene of interest, and for constructing mutations in a gene of interest.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   enzyme; human; ENZM; cytostatic; antiarteriosclerotic; antidiabetic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   55.6%; Score 5; DB 9; Length 98;
100.0%; Pred. No. 2.5e+02;
ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                             Wiegand RC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Example 2; SEQ ID NO 13342; 25pp; English
                                                                                                                                                                                                                                                             Slater SC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADC14235 standard; protein; 102 AA.
                                                                                                                                                                                             (MONS ) MONSANTO TECHNOLOGY LLC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  28-SEP-2001; 2001US-0326388P.
12-OCT-2001; 2001US-0328979P.
19-OCT-2001; 2001US-0346034P.
26-OCT-2001; 2001US-0348284P.
08-NOV-2001; 2001US-0338048P.
16-NOV-2001; 2001US-0339048P.
14-DEC-2001; 2001US-0330357P.
                                                                  10-JUL-2001; 2001US-00902540
                                                                                                                              10-JUL-2000; 2000US-0217883P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          26-SEP-2002; 2002WO-US031096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18-DEC-2003 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5; Conservative
                                                                                                                                                                                                                                                         Hinkle GJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human enzyme ENZM-41
                                                                                                                                                                                                                                                                                                                     WPI; 2005-028716/03.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       29 FLRHP 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5 FLRHP 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO2003042357-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 98 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                             Goldman BS,
   21-DEC-2004
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This invention relates to a novel isolated polynucleotide comprising a nucleotide sequence selected from one of 1680 sequences, a mature protein conding portion of them, an active domain of them and their complementary sequences. The invention may be useful for the production of compounds with an antiarthritic, antiparkinsonian, neuroprotective, nootropic, antibacterial, antiviral, antipusoriatic, antiparasitic activity. In addition, the disclosed sequences may be useful for gene therapy. The polypeptides or their antibodies are useful for treating many diseases such as arthritis, Parkinson's, Alzheimer's, autoimmune diseases, cancer, psoriasis, inflammatory bowel disease and infections caused by bacteria, viruses, fungi or parasites. The present sequence is that of a human polypeptide of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Isolated polynucleotide encoding bone marrow derived polypeptides useful for treating, e.g., Parkinson's, Alzheimer's, cancer, arthritis, Crohn's disease, and inflammatory bowel disease.
                                                                                                                                                         1. .90
/label_OTHER
/loce= "OTHER= All Xaa's in this sequence are unknown amino acids or the site of a stop codon within the DNA
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                                                                                                                           Location/Qualifiers
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19-MAY-2000; 2000US-00574454.
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fungus; parasite; human.
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                                                               Homo sapiens
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RESULT 39 ABM94143

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PR 29-WR-2002; 2000US-0368792P.
PR 47-2002; 2000US-0368792P.
PR 47-2002; 2000US-0381538P.
PR 47-2002; 2000US-0381538P.
PR 47-2002; 2000US-0381538P.
PR 51-JUN-2002; 2000US-0381538P.
PR 51-JUN-2002; 2000US-0381538P.
PR 51-JUN-2002; 2000US-0381538P.
PR 51-JUN-2002; 2000US-03811538P.
PR 51-JUN-2002; 2000US-0381153P.
PR 50-SEY, Chang H, Bmerling BM, Tang YY, Lall FG, KADLe AB; PR 1 Marquis JP, Jiang K, Jackson AA, Zebarjadian Y, Swarnakar A; Milan AD, Jiang K, Jackson AA, Zebarjadian Y. Swarnakar A; Milan AD, Jian P, Kichardson TW, Bhatia U, Burrill JD, Lee S, Black JJ, Ho A, Zheng W, Gao J; Bhatia U, Burrill JD, Lee S, Black JJ, Ho A, Zheng W, Gao J; Bhatia U, Burrill JD, Lee S, Black JJ, Ho A, Zheng W, Gao J; Bhatia U, Burrill JD, Lee S, Brand A, Zebarjadian Y, Swarnakar A; WPJ; 2003-44956742.

Ne PSDB; ADC1428B.
XX Ne Meman enzymes [BNZM), useful for diagnosing, treating and preventing diseases or conditions associated with the aberrant ENZM expression e.g. CC antiAttention relates to a novel isolated human enzyme (ENZM) polypeptide of the invention may have a use in gene therepy. The polypeptides and polyuchective, anti-HIV, anti-HIV, anti-HIV, anti-HIV, anti-HIV, anti-HIV, anti-HIV, anti-HIC and corporated or the invention may have a use in gene therepy. The polypeptides and polyuchectides are useful in diagnosing, treating and preventing diseases or conditions associated with the decreased or coverage sign or expression or overage polyuchective and compounds that specifically the ENZM protein interactions, and gene expression profiles. The sequences shown in conditions and gene expression profiles. The sequence shown in Relating to Resulting protein-protein interactions, and gene expression profiles. The
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Sequence 102 AA; uery Match 55.6%; Score

Query Match
55.6%; Score 5; DB 7; Length 102;
Best Local Similarity 100.0%; Pred. No. 2.6e+02;
Matches 5; Conservative 0; Mismatches 0; Indels

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0; Gaps

5 FLRHP 9 ||||| 57 FLRHP 61

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Search completed: August 31, 2006, 10:46:54 Job time : 108.75 secs

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GenCore version 5.1.9 Copyright (c) 1993 - 2006 Bioco	search, using sw model	31, 2006, 10:29:54 ;		JE_SEROTYPE1	vetwflrhp 9		p 60.0 , Gapext 60.0	598 segs, 925015592 residues		satisfying chosen parameters:		1: 200000000	ing first 150 summaries	UniProt 7.2;*			results predi 1 to the score	of the total	SUMMARIES		Length DB ID	266 2	405 Z 537 2	946 2	1079	1093 2	29 2	79 2	80	87 2	95 2	101 2	115 1	115 2	118 2	122 2	124 2	126 2	128 2	132 2	136 2 Q977K8—9CREN	136 2
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Birren B.W. Nubbaum C., Abouelleil A., Allen N., Anderson S., Arachchi H.W. Barna N., Bastien V., Bloom T., Boguslavkiy L., A choepel Y., Collymore A., Cook P., Cooke P., Corum B., DeArellano K., Diaz J.S., Dodge S., Dooley, K., Dorris L., Elkins T., Engels R., Erickson J., Ferreira P., FitzGerald M., Gage D., Cangan J., Ferreira P., FitzGerald M., Gage D., Calagan J., Readyna S., Graham L., Grand-Pierre N., A Laiez N., Hagos B., Hall J., Horton L., Hulme W., AR Laiez N., Kells C., Landers T., Levine R., Lindblad-Toh K., Liu G., Maratas A., Kells C., Landers T., Levine R., Lindblad-Toh K., Liu G., Maring J., Mathwas C., Maucell E., McCarthy M., Meldrim J., Maning J., Mathwas T., Mandblad-Toh K., Liu G., Manning J., Mathwas T., Mangor J., Noguyen C., Nolelsen C.B., Norbu C., O'Connor T., O'Donnell P., Nicola R., Nielsen C.B., Norbu C., O'Connor T., O'Donnell P., Nicola R., Nachupka, R., Seaman S., Severy P., Ramasan J., Schauer S., Schubback R., Seaman S., Severy P., Stubbs M., Talamas J., Tesfaye S., Theodore J., Topham K., Travers M., Stubbs M., Talamas J., Tesfaye S., Theodore J., Topham K., Travers M., Wyman D., Young G., Zainoun J., Zimmer A., Zimmer A., Zody M., Lander E.S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms Distributed under the Creative Commons Attribution-NoDerivs License
                Copyrighted by the Uniprot Consortium, see http://www.uniprot.org/terms
Distributed under the Creative Commons Attribution-NoDerivs License
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "Fusarium graminearum genome sequence.";
Submitted (FBE-2004) to the EMBL/GenBank/DDBJ databases.
-!- CAUTION: The sequence shown here is derived from an
EMBL/GenBank/DDBJ whole genome shotgun (WGS) entry which is
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gibberella zeae (Fusarium graminearum).
Bukaryota, Fungi, Ascomycota, Pezizomycotina, Sordariomycetes,
Hypocreomycetidae, Hypocreales, Nectriaceae, Gibberella.
NCBI_TaxID=5518;
                                                    EMBL, CP000009; AAW61446.1; -; Genomic DNA.

GO; GO:0016787; F:hydrolase activity; IEA.

GO; GO:0008152; P:metabolism; IEA.

InterPro; IPR013200; HAD.3.

InterPro; IPR000150; HAD.SF_IIB.

InterPro; IPR000150; Hydrolase; 1.

IGREAMS; TIGR00099; Cof-subfamily; 1.

ITGREAMS; TIGR00099; Cof-subfamily; 1.

PROSITE; PS01229; COF 2; UNKNOWN 1.

PROSITE; PS01229; COF 2; UNKNOWN 1.

SEQUENCE 266 AA; 28559 MW; A20E08223C537EFE CRC64;
                                                                                                                                                                                                                                                              Length 266;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          16-AUG-2005, integrated into UniProtKB/TrEMBL.
16-AUG-2005, sequence version 1.
07-FRB-2006, entry version 4.
ORPOCHETICAL protein.
ORFNames=FG00026.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].
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Pred. No. 49;
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100.0%; Pred. No. ...
0; Mismatches
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05k016 rice stripe
03g42 silicibacte
09B61 rhicoblam
03g42 silicibacte
09B61 rhicoblam
03g82 pelobacter
03g82 pelobacter
03f261 burkholderi
03f261 burkholderi
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03f261 burkholderi
03f261 lactobacill
05r317 nocardia fa
04r06 kinecoccus
06f10 bacillus il
05r317 burkholderi
03189 deinococcus
06f10 mus musculu
05pin7 salmonella
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Prust C., Hoffmeister M., Liesegang H., Wiezer A., Fricke W.F.,
Ehrenreich A., Gottschalk G., Deppenmeier U.;
"Complete genome sequence of the acetic acid bacterium Gluconobacter acydans.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gluconobacter oxydans (Gluconobacter suboxydans).
Bacteria; Proteobacteria; Alphaproteobacteria; Rhodospirillales;
Acetobacteraceae; Gluconobacter.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-MAR-2005, integrated into UniProtKB/TrEMBL. 01-MAR-2005, sequence version 1. 07-FBB-2006, entry version 6. 07-FBB-2006, entry version 6. OrderedLocusNames=GOX1706;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               [1] NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA]
                                                                                                                                                                                                              099861_RHILO
0998281_RHILO
093C92_9FIRM
082F58_GALTY
037261_9DELT
033821_MOUSE
048821_MOUSE
04882 PSESY
05FUB1_LACAC
05VBB2_DSESY
05FUB1_LACAC
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040VL6 KINRA
06SIGB-BACLD
09K802-STRCO
06F256-MESFL
09A3B2-CAUCR
0331V9-METHU
04H823-9DEIO
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Q4BWG1_CROWT
Q8S5H1_ORYSA
Q2T527_BURTH
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MENTO_HUMAN
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Q98B61_;
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PubMed=15496914; DOI=10.1038/nature03025;
PubMed=15496914; DOI=10.1038/nature03025;
PubMed=15496914; DOI=10.1038/nature03025;
PubMed=15496914; DOI=10.1038/nature03025;
PubMed=15496914; DOI=10.104.
Parity C., Jaffe D., Fisher S., Lutfalla G., Dossat C., Segurens B., Dasilva C., Salanoubat M., Levy M., Boudet N., Castellano S., Anthouard V., Jubin C., Castelli V., Katinha M., Vacherie B., Biemont C., Skalli Z., Cattolico L., Poulain J., De Berardinis V., Biemont C., Skalli Z., Cattolico L., Poulain J., De Gerardinis V., Parra G., Lardier G., Chapple C., McKernan K.J., McEwan P., Bosak S., Kellis M., Volff J.-N., Guigo R., Zody M.C., Mesirov J., Lindblad-Toh K., Birren B., Nusbaum C., Kahn D., Robinson-Rechavi M., Laudet V., Schachter V., Weissenbach J., Roest Crollius H.;
Plaudet V., Lander E.S., Weissenbach J., Roest Crollius H.;
Plander duplication in the teleost fish Tetraodon nigroviridis reveals
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms Distributed under the Creative Commons Attribution-NoDerivs License
                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                  ORFNames=GSTENG00011650001;
Tetraodon nigroviridis (Green puffer).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
Acanthomorpha; Acanthopterygii; Percomorpha; Tetraodontiformes;
Tetradontoidea; Tetraodontidae; Tetraodon.
                                                                                                                                                                                                                                                         19-JUL-2005, sequence version 1.
07-FBB-2006, entry version 6.
Chromosome undetermined SCAF13690, whole genome shotgun sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Genoscope: Whitehead Institute Centre for Genome Research;
Submitted (FEB-2004) to the EMBL/GenBank/DDBJ databases.
-!- CAUTION: The sequence shown here is derived from an
EMBL/GenBank/DDBJ whole genome shotgun (WGS) entry which is
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-!- SIMILARITY: Belongs to the intermediate filament family.
                                                          Length 405;
                                                                                    0; Indels
                1 protein.
5E275BB334F6AE3E CRC64; '
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GO; GO:0005882; C:intermediate filament; IEA.
GO; GO:0005198; F:structural molecule activity; IEA.
InterPro; IPR001664; IF.
EMBL; AACM01000002; EAA69365.1; -; Genomic_DNA.
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                                                      66.7%; Score 6; DB 2;
100.0%; Pred. No. 69;
cive 0; Mismatches
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Pfam; PF04732; Filament head; 1.
PROSITE; PS00226; IF; 1.
                Complete proteome; Hypothetical SEQUENCE 405 AA; 43960 MW; 5
                                                                                                                                                                                                                 PRELIMINARY;
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                                                                      Local Similarity 100.
108 6; Conservative
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Q4SW56;
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DB 2;

66.7%; Score 6; DB 2 100.0%; Pred. No. 85;

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Homo sapiens (Human).
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Butheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US DOE Joint Genome Institute (JGI-ORNL);
Larimer F., Land M.;
"Annotation of the draft genome assembly of Shewanella denitrificans
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Q81ZF5; Q6UXT7; Q6UXX3; Q86SL7; Q81XD8; Q8TDT3;
15-FRB-2005, integrated into UniProtKB/Swiss-Prot.
01-MAR-2003, sequence version 1.
07-MAR-2006, entry version 25.
Probable G-protein coupled receptor 113 precursor (G-protein coupled receptor PGR23).
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Copeland A., Lucas S., Lapidus A., Barry K., Detter C., Glavina T.,
Hammon N., Israni S., Pitluck S., Richardson P.;
"Sequencing of the draft genome and assembly of Shewanella
                                                                                                                                                                                                                                                                                                                                                    ORFNames=SdenDRAFT 1215;
Shewanella denitrificans OS217.
Bacteria; Proteobacteria; Gammaproteobacteria; Alteromonadales;
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Local Similarity 100.0%; Pred. No. 1.3e+02;
es 6; Conservative 0; Mismatches 0;
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                                                                                                                                                                                                                                                      25-0CT-2005, integrated into UniProtKB/TrEMBL.
25-0CT-2005, sequence version 1.
07-FEB-2006, entry version 3.
Pypothetical protein precursor.
ORFNames=SdenDRAFT_1215;
  Mismatches
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ENSG0000173567; Homo sapiens.
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                                                                                                                                                                                                              Suwa M., Sato T., Okouchi I., Arita M., Futami K., Matsumoto S.,
Tsutsumi S., Aburatani H., Asai K., Akiyama Y.;
"Genome-wide discovery and analysis of human seven transmembrane helix
                                                                                                                                                                                                                                                                                                                                                                   MEDINE=22887296; PubMed=12975309; DOI=10.1101/gr.1293003; Clark H.F., Gurney A.L., Abaya E., Baker K., Baldwin D.T., Brush J., Chen J., Chow B., Chui C., Crowley C., Currell B., Deuel B., Dowd P., Eaton D., Foster J.S., Grimaldi C., Gu Q., Hass P.E., Heldens S., Huang A., Kim H.S., Klimowski L., Jin Y., Johnson S., Lee J., Leswis L., Liao D., Mark M.R., Robbie E., Sanchez C., Scheenfeld J., Schaglis, S., Simmons L., Singh J., Smidh V., Singh J., Singh J., Singh D., Woods K., Xie M.-H., Vandlen R.L., Watenabe C., Wieand D., Woods K., Xie M.-H., Wood W.I., Godowski P.J., Gray A.M., Zhang Z., Goddard A.D., Wood W.I., Godowski P.J., Gray A.M., The secreted protein discovery initiative (SPDI), a large-scale effort to identify novel human secreted and transmembrane proteins: a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA] OF 563-1079.
MEDILINE=22040266; PubMed=12044878; DOI=10.1016/50014-5793(02)02775-8;
Takeda S., Kadowaki S., Haga T., Takeda H., Mitaku S.;
"Identification of G protein-coupled receptor genes from the human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -:- SIMILARITY: Belongs to the G-protein coupled receptor 2 family. Ln-TM7 subfamily.
-:- SIMILARITY: Contains 1 GPS domain.
-:- CAUTION: Ref. 2 sequence differs from that shown due to erroneous
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IsoId=Q8IZF5-2; Sequence=VSP_012815, VSP_012816, VSP_012817;
Note=Ref.3 (AAQ88581) sequence is in conflict in position:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MUCLEOTIDE SEQUENCE [LARGE SCALE MRNA] OF 797-942.
MEDLINE=22584407; PubMed=12679517; DOI=10.1073/pnas.0230374100;
Medilatis D.K., Hohmann J.G., Zeng H., Li F., Ranchalis J.E.,
Mortrud M.T., Brown A., Rodriguez S.S., Weller J.R., Wright A.C.,
Bergmann J.E., Gaitanaris G.A.;
"The G protein-coupled receptor repertoires of human and mouse.";
Proc. Natl. Acad. Sci. U.S.A. 100:4903-4908(2003).
-!- FUNCTION: Orphan receptor.
-!- SUBCELLULAR LOCATION: Membrane; multi-pass membrane protein.
                                                 NUCLEOTIDE SEQUENCE [MRNA] (ISOFORM 1).
PubMed=12435584; DOI=10.1016/S0014-5793(02)03574-3;
Fredrikhsson R., Lagerstroem M.C., Hoeglund P.J., Schioeth H.B.;
"Novel human G protein-coupled receptors with long N-terminals containing GPS domains and Ser/Thr-rich regions.";
FEBS Lett. 531:407-414(2002).
                                                                                                                                                                                                                                                                                                                 [3]
NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA] (ISOFORM 2), AND VARIANT
                                                                                                                                                                                                                                                                          receptor genes.", Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.
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EMBL; AB065959; BAC45265.1; ALT_SEQ; Genomic_DNA.
EMBL; AY358172; AAQ68539.1; -; mRNA.
EMBL; AY358214; AAQ68561.1; -; Other RNA.
EMBL; A8083619; BAB89313.1; ALT_INIT; Genomic_DNA.
EMBL; AY355611; AAO85123.1; -; mRNA.
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                                                                                                                                                                                             NUCLEOTIDE SEQUENCE [GENOMIC DNA].
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Genome Res. 13:2265-2270(2003).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    bioinformatics assessment."
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                NCBI_TaxID=9606;
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ROWGELIERDKAWNERIDRPPPACPIPLSSSFGRWPKGQT
WMAQTSTLTLTEEEL -> MTTRKLSAHSAATPGYKAVTHK
HHTGMARMAKTGLPEK (1n isoform 2).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Probable G-protein coupled receptor 113.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Membrane, Polymorphism, Receptor, Signal, Transducer, Transmembrane.
SIGNAL 1 25 Potential.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (GlCNAc. . .) (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1079 AA; 116341 MW; A18CA158F4DDBB9C CRC64;
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2 (Potential).
Extracellular (Potential)
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Extracellular (Potential)
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Extracellular (Potential)
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Cytoplasmic (Potential).
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Cytoplasmic (Potential).
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Missing (in isoform 2).
/FTId=VSP_012816.
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N-linked
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N-linked
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N-linked
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hes 6; Conservative
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1079
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599
886
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Gaps

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                                          NUCLEOTIDE SEQUENCE.
Schulte U., Aign V., Hoheisel J., Brandt P., Fartmann B., Holland R.,
Nyakatura G., Mewes H.W., Mannhaupt G.;
Submitted (JAN-2002) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                   66.7%; Score 6; DB 2; Length 1093; 100.0%; Pred. No. 1.5e+02; ive 0; Mismatches 0; Indels
  Sordariomycetidae; Sordariales; Sordariaceae; Neurospora
                                                                                                                             German Neurospora genome project;
Submitted (JAN-2002) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                           Hypothetical protein.
SEQUENCE 1093 AA, 120695 MW, 9F6BF07A8AD661BD CRC64;
                                                                                                                                                                                                           EMBL; AL670004; CAD21248.1; -; Genomic_DNA.
                                                                                                                                                                                                                                                                                                6; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Predicted protein.
ORFNames=NCU08869.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          preliminary data.
                                                                                                              NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                     621 WFLRHP 626
                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                           4 WFLRHP 9
             NCBI_TaxID=5141;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=5141;
                                                                                                                                                                                                                                                                                                                                                                                                                        07S795 NEUCR
07S795;
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                                                                                           Eukaryota; Metazoa; Chordata, Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R GO; GO:0016020; C::mobrane; IEA.

R GO; GO:0004930; F:G-protein coupled receptor activity; IEA.

R GO; GO:0007218; P:neuropeptide signaling pathway; IEA.

R GO; GO:0007218; P:neuropeptide signaling pathway; IEA.

R InterPro; IPR000822; GEF like reg.

R InterPro; IPR000823; GRCR secretin.

R Ffam; PF000023; PRD_Cys_rich.

R Ffam; PF000023; PRD_Cys_rich.

R Ffam; PF000023; PRD_Cys_rich.

R PAINTY: R000249; GPCRSECRETIN.

R RANAT; SM00303; GPS; 1.

R ROSITE; PS00136; GFF 2; UNKNOWN 1.

R ROSITE; PS00509; G_PROTEIN_RECEP_F2_2; UNKNOWN_1.

R ROSITE; PS00501; G_PROTEIN_RECEP_F2_3; 1.

R ROSITE; PS50261; G_PROTEIN_RECEP_F2_4; 1.

R ROSITE; PS50261; G_PROTEIN_RECEP_F2_4; 1.

R HYDCHHEICAI protein.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Neurospora crassa.
Eukaryota, Fungi, Ascomycota; Pezizomycotina, Sordariomycetes,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 1079;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Indels
                                                                                                                                                                                                                                                    Waterston R.H.;
Submitted (SEP-1999) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                Swearengen S., Cordes M., Cotton M.;
"The sequence of Homo sapiens BAC clone RP11-499P9.";
Submitted (SEP-1999) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                       to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                     Wilson R.K.;
Submitted (APR-2005) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 66.7%; Score 6; DB 2; Lei 100.0%; Pred. No. 1.5e+02;
           24-MAY-2005, integrated into UniProtKB/TrEMBL. 24-WAY-2005, sequence version 1. 07-FBB-2006, entry version 3. 07-FBB-2006, entry version 3. 07-WAR-2006, entry version 3. 08-WAR-2008, wame=GPR113;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-MAR-2002, integrated into UniProtKB/TrEMBL.
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QBXORO;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; AC010896; AAY14645.1; -; Genomic_DNA.
Ensembl; ENSG00000173567; Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%; Pred. ...
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O7-FBB-2006, entry version 9.
Hypothetical protein 5E6.080.
Name=5E6.080;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity 100.
Matches 6; Conservative
                                                                                                                                                                                                                                                                                                             Waterston R.;
Submitted (JAN-2002)
                                                                                 Homo sapiens (Human)
                                                                                                                                                                                                                                       NUCLEOTIDE SEQUENCE.
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                                                                                                                                    NCBI_TaxID=9606;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 7
08XORO NEUCR
08XORO NA
AC 08XORO NO
DT 01-MAR-2:
DT 01-MAR-2:
DT 07-PEB-3:
DE HYPOTHET
GN Name=5E6
GN Neurospo
OC Eukaryor.
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STRAIN-74-0R33-1A / FGSC 987;

WEDLINE-22598136; PubMed=12712197; DOT=10.1038/nature01554;

WEDLINE-22598136; PubMed=12712197; DOT=10.1038/nature01554;

WEDLINE-22598136; PubMed=12712197; DOT=10.1038/nature01554;

AdfeD J. FitzHugh W. Ma L.-J., Smirnov S., Purcell S., Reaman B., And D., FitzHugh W., Mall-Pedersen D., Butler J., Endrizzi M., And D. J., Tanakiev P., Ball-Pedersen D., Nelson M.A., Werner-Washburne M., Selltrennikoff C.P., Kinsey J.A., Braun E.L., Marcotte E., Greenberg D., Roy A., Foley K., Nawylor J., Stange-Thomann N., Barrett R., Ghert S., Kamal M., Kamvysselis M., Stange-Thomann N., Barrett R., Ghert S., Kamal M., Kamvysselis M., Mauceli E., Bielke C., Rudd S., Frishman D., Krystofova S., Cogoni C., Asmusian G., Catcheside D.E.A., Li W., Pratt R.J., Cogoni C., Andero G., Catcheside D.E.A., Li W., Pratt R.J., Osemani S.A., Narden O., Plamann M., Seiler S., Dunlap J.C., Radford A., Aramayo R., Arden O., Plamann M., Seiler S., Dunlap J.C., Radford A., Aramayo R., Paulsen I., Sachs M.S., Lander E.S., Nusbaum C., Birren B.W.;

The genome sequence of the filamentous fungus Neurospora crassa.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms Distributed under the Creative Commons Attribution-NoDerivs License
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -!- CAUTION: The sequence shown here is derived from an EMBL/GenBank/DDBJ whole genome shotgun (WGS) entry which is
                                                                                                                                                                                                                                                                                                                                        Neurospora crassa.
Eukaryota, Fungi, Ascomycota, Pezizomycotina, Sordariomycetes,
Sordariomycetidae, Sordariales, Sordariaceae, Neurospora.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 66.7%; Score 6; DB 2; Length 1117;
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SEQUENCE 1117 AA; 123343 MW; 1998B0ECD607752D CRC64;
                                                                                               15-DEC-2003, integrated into UniProtKB/TrEMBL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA]
     PRT; 1117 AA
                                                                                                                                        15-DEC-2003, sequence version 1. 07-FEB-2006, entry version 9.
PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nature 422:859-868(2003).
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13-SEP-2005, sequence version 1.
07-FEB-2006, entry version 4.
Hypothetical protein.
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                                                                                                                                                                                                                                                                    Best Local Similarity 100.
Matches 5; Conservative
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Matches 5; Conservative
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66 FLRHP 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=29397;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRAIN=ATCC 4797;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         44 FLRHP 48
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046AP0 METBA
AC 046AP0.MI
AC 046AP0.DT 13-SEP-20
DT 13-SEP-20
DF Hypothet;
GN OrderedLOSN Methanose
OC Archaea;
OC Methanose
OC Nethanose
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NON TER
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A Lafontaine I., de Montigny J., Marck C., Neuveglise C., Talla E.,
Goffard N., Frangeul L., Aigle M., Anthouard V., Babour A., Barbe V.,
Barnay S., Blanchin S., Beckerich J.-M., Beyne E., Bleykasten C.,
A Boisrame A., Boyer J., Cattolico L., Confanioleri F., de Daruvar A.,
Despons L., Fabre E., Fairhead C., Ferry-Dumazer H., Groppi A.,
Hantraye F., Hennequin C., Jauniaux N., Joyet P., Kachouri R.,
Kerrest A., Koszul R., Lemaire M., Lesur I., Ma L., Muller H.,
A Nicaud J.-M., Nikolski M., Oztas S., Ozier-Kalogeropoulos O.,
Swennen D., Tekaia F., Wesolowski-Louvel M., Westhof E., Wirth B.,
A Senlou-Mayer M., Zivanovic Y., Bolctin-Fukuhara M., Thierry A.,
Bouchier C., Caudron B., Scarpelli C., Gaillardin C., Weissenbach J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms Distributed under the Creative Commons Attribution-NoDerivs License
                   Gaps
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                                                                                                                                                                                                                                                                    OrderedLocusNames=YALIOA20042g;
Yarrowia lipolytica (Candida lipolytica).
Bukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes;
Saccharomycetales; Dipodascaceae; Yarrowia.
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0
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0
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Bacteria; Bacteroidetes; Bacteroidetes (class); Bacteroidales;
Bacteroidaceae; Bacteroides.
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                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 2; Length 29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5FB2DCF7AA4626ED CRC64;
 100.0%; Pred. No. 1.5e+02; ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                  NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].
STRAIN=CLIB 122 / E 150;
PubMed=15229592; DOI=10.1038/nature02579;
                                                                                                                                                                                                    16-AUG-2004, integrated into UniProtKB/TrEMBL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-JUN-2003, integrated into UniprotKB/TrEMBL.
01-JUN-2003, sequence version 1.
07-FBB-2006, entry version 9.
07-FBB-2006, entry version 9.
OrderedLocusNames=BT3218; ORFNames=BT_3218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                [1] -
NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA]
                                                                                                                                                                     29 AA.
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100.0%; Pred. No. 1.3
:ive 0; Mismatches
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                                                                                                                                                                 QGCGE3 YARLI PRELIMINARY; PRT;
                                                                                                                                                                                                                    16-AUG-2004, sequence version 1.
07-FEB-2006, entry version 12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            evolution in yeasts.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Complete proteome.
SEQUENCE 29 AA; 3169 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 100.
Matches 5; Conservative
                    6, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nature 430:35-44 (2004).
                                                                         621 WFLRHP 626
Best Local Similarity
Matches 6; Conserv
                                                  4 WFLRHP 9
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                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=4952;
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                                                                                                                                                                                                                                                      Similarity.
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08A217
BAC
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08A217
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Distributed under the Creative Commons Attribution-NoDerivs License
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STRAIN=VPI-5482 / ATCC 29148;
MEDLINE=22550858; PubMed=12663928; DOI=10.1126/science.1080029;
Xu J. Sjursell M.K., Himrod J., Deng S., Carmichael L.K.,
Chiang H.C., Hooper L.V., Gordon J.I.;
"A genomic view of the human-Bacteroides thetaiotaomicron symbiosis.";
Science 299:2074-2076(2003).
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                                                                                                                                                                                                                                                                                                                                                                                                                     0; Indels
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05-JUL-2004, sequence version 1.
07-FBB-2006, entry version 7.
Sufi protein (Fragment).
Lactobacillus delbrueckii subsp. lactis.
Bacteria; Firmicutes; Lactobacillales; Lactobacillaceae; Lactobacillales; Lactobacillaceae;
                                                                                                                                                                                                                                                                                                                                                                    55.6%; Score 5; DB 2; Length 77; 100.0%; Pred. No. 2.9e+02;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Langenheim J.F., ulrich R.L.; Submitted (MAR-2002) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                              79 79
79 AA; 9042 MW; SE609E1F96CFFD10 CRC64;
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13-SEP-2005, integrated into UniProtKB/TrEMBL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL, AF496414; AAQ07102.1; -; Genomic_DNA
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Q71136 LACDL
ID Q71136_LACDL PRELIMINARY; PRT;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Carapito C., Muller D., Turlin E., Riegel P., Leize E., Danchin A., Van Dorsselaer A., Bertin P., Lett M.-C.;
"Pleiotropic effect of arsenic stress on Cenibacterium arsenoxidans, metalloresistant beta-proteobacterium.", Submitted (AUG-2004) to the EMBL/GenBank/DDBJ databases.
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Actinopterygii, Neopterygii, Teleostei; Euteleostei;
Protacanthopterygii, Salmoniformes, Retropinnidae; Retropinna.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -i- FUNCTION: Component of the ubiquinol-cytochrome c reductase complex (complex III or cytochrome b-c1 complex), which is a respiratory chain that generates an electrochemical potential coupled to ATP synthesis (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -!- COFACTOR: Binds 2 heme groups noncovalently (By similarity).
-!- SUBUNIT: The main subunits of complex b-cl are: cytochrome b, cytochrome cl and the Rieske protein (By similarity).
-!- SIMILARITY: Belongs to the cytochrome b family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              55.6%; Score 5; DB 2; Length 87; 100.0%; Pred. No. 3.2e+02; ive 0; Mismatches 0; Indels
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01-OCT-2000, sequence version 1.
07-FBB-2006, entry version 21.
Cytochrome D (Fragment).
                                                                                                                                                               OSOCO7 CENAS PRELIMINARY; PRT; 87 AA.. OSOCO7; 04-JAN-2005, integrated into UniProtKB/TrEMBL
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                                                                                                                                                                                                                                                                            07-FEB-2006, entry version 4. Hypothetical protein (Fragment). Cenibacterium arsenoxidans.
                                                                                                                                                                                                                                                         sequence version 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5; Conservative
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                                       32 FLRHP 36
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Q9MISS;
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29MISS 9TELE
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MEDLINE-21920760; PubMed=11932238; DOI=10.1101/gr.223902;

A RICAMA J.E., Nusbaum C., Roy A., Endrizzi M.G., Macdonald P.,

A Allen N., Naylor J., Stange-Thomann N., DeArellano K., Johnson R.,

Linton L., McEwan P., McKernan K., Talamas J., Tirrell A., Ye W.,

A Linton L., McEwan P., McKernan K., Talamas J., Tirrell A., Ye W.,

A Linton L., McEwan P., McKernan K., Talamas J., Tirrell A., Ye W.,

A Linton L., McEwan P., McRetnan M.E., Kraycki J.A.,

Leigh J.A., Li W., Liu W., Liu W., Liu W., Mukhopadhyay B., Reeve J.N., Smith K.,

Byringer T.A., Umayam L.A., White O., White R.H., de Macario B.C.,

Perry J.G., Jarrell K.F., Jing H., Macario A.J.L., Paulsen I.T.,

Pritchett M., Sowers K.R., Swanson R.V., Zinder S.H., Lander E.,

Meccalf W.W., Birren B.A.,

M. H. Genome of Methanosarcina acetivorans reveals extensive metabolic
                                                                                                                                                                                                                                           Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms Distributed under the Creative Commons Attribution-NoDerivs License
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                                                             Glavina
NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].
STRAIN=Fusaro / DSM 804;
STRAIN=Fusaro / DSM 804;
Scopeland A., Lucas S., Lapidus A., Barry K., Detter J.C., Glavina Hammon N., Israni S., Pitluck S., Goodwin L.A., Saunders E.H., Schmutz J., Larimer F., Land M., Anderson I., Richardson P., Longlete sequence of chromosome 1 of Methanosarcina barkeri str.
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01-JUN-2002, sequence version 1.
07-MAR-2006, entry version 11.
08-FNames=MA_4126;
Methanosarcina acetivorans.
Methanosarcina acetivorans.
Methanosarcinaceae, Methanosarcina,
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Pred. No. 3e+02;
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                                                                                                                                                                                                                                                                                                                      EMBL; CP000099; AAZ71052.1; -; Genomic DNA.
Complete proteome; Hypothetical protein.
SEQUENCE 80 AA; 9187 MW; 2DD0ED9A5ESC4CB3 CRC64;
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SEQUENCE 80 AA; 9184 MW; DF02721324F5D173 CRC64;
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100.0%; Pred. No. 3e+02
iive 0; Mismatches
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ive 0; Mismatches
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GenomeReviews; AE010299 GR; MA4126.
BioCyc; MACE188937:MA4126-MONOMER; -.
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Genome Res. 12:532-542(2002).
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Matches 5; Conservative
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FLRHP 36
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QETIM1;
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ORTIMM MET
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PRELIMINARY;
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                                                                                                                                                         Hypothetical protein.
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Q82LF3 STRAW
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Y115_ADE02
ID _Y115_ADE02
AC P03290;
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Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms Distributed under the Creative Commons Attribution-NoDerivs License
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22-NOV-2005, sequence version 1.
07-FBB-2006, entry version 3.
Hypothetical protein.
ORFNames=Plut 1094;
Pelodictyon luteolum (strain DSM 273) (Chlorobium luteolum (strain DSM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
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Copeland A., Lucas S., Lapidus A., Barry K., Detter J.C., Glavina T., Hammon N., Israni S., Pitluck S., Bryant D., Schmutz J., Larimer F., Land M., Kyrpides N., Ivanova N., Richardson P.;

"Complete sequence of Pelodictyon luteolum DSM 273.";
Submitted (AUG-2005) to the EMBL/GenBank/DDBJ databases.
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                                                                                                                                                  GO, GO:0016021, C:integral to membrane; IEA.
GO; GO:0016021, C:integral to membrane; IEA.
GO; GO:0016746, C:mitochondrial electron transport chain; IEA.
GO; GO:0005739, C:mitochondrial electron transport chain; IEA.
GO; GO:0005739, C:mitochondrial electron transport chain; IEA.
GO; GO:0005709, F:iron ion binding; IEA.
GO; GO:0016491; F:oxidoreductase activity; IEA.
GO; GO:0016491; F:oxidoreductase activity; IEA.
InterPro: IRR06797; Cytb b6.
PEam; PF00033; Cytochrom E N; 1.
PROSITE; PSS1002; CYTB_NTER; 1.
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Chlorobium/Pelodictyon group, Pelodictyon.
NCBL_TaxID=319225,
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SEQUENCE 101 Aa; 11173 MW; AAEF2D3DE11B891C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              95 AA; 10578 MW; E7F5ABDD28E269DE CRC64;
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                                                                                   EMBL; AF112321; AAF67414.1; -; Genomic_DNA.
SMR; Q9MISS; 1-95.
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Best Local Similarity 100...
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STRAIN=DSM 273;
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Best Local Similarity
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                                                                                                                                                                                                                                                                       NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].
STRAIN=MA-4680 / ATCC 31267 / NCIMB 12804 / NREL 8165;
MEDLINE=22609306; PubMed=12692562; DOI=10.1038/nbt820;
Ikeda H., Ishikawa J., Hanamoto A., Shinose M., Kikuchi H., Shiba T., Sakaki Y., Hattori M., Omura S.;
"Complete genome sequence and comparative analysis of the industrial microorganism Streptomyces avermitilis.";
Nat. Biotechnol. 21:526-531(2003).
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BDioCyc; SAVE227882:SAV2057-MONOMER, -.
GO; GO:0003677; F:DNA binding; IER.
GO; GO:0006355; P:regulation of transcription, DNA-dependent; IEA.
GO; GO:00063550; P:transcription; IEA.
InterPro; IPR011991; Wing_hlx_DNA_bd.
Complete proteome; DNA-binding; Hypothetical protein; Transcription;
Transcription regulation.
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MEDLINE=83056843; PubMed=7142161;
Gingeras T.R., Sciaky D., Gelinas R.E., Bing-Dong J., Yen C.E.,
Kelly M.M., Bullock P.A., Parseons B.L., O'Neill K.E., Roberts R.J.;
"Nucleotide sequences from the adenovirus-2 genome.";
J. Biol. Chem. 257:13475-13491(1982).
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21-JUL-1986, sequence version 1.
07-FBE-2006, entry version 21.
Hypothetical protein E-115.
Hypothetical az (HAdv-2).
Viruses; dsDNA viruses, no RNA stage; Adenoviridae; Mastadenovirus.
NCBL_TaxID=10515;
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STRAIN=MA-4680 / ATCC 31267 / NCIMB 12804 / NRRL 8165;
MREDLINES=21477403; PubMed=11572948; DOI=10.1073/pnas.211433198;
Omura S., Ikeda H., Ishikawa J., Hanamoto A., Takahashi C.,
Shinose M., Takahashi Y., Horikawa H., Nakazawa H., Osonoe T.,
Kikuchi H., Shiba T., Sakaki Y., Hattori M.;
Genome sequence of an industrial microorganism Streptomyces avermatilis: deducing the ability of producing secondary
                                                                                                                                        Streptomyces avermitilis.
Bacteria; Actinobacteria; Actinobacteridae; Actinomycetales;
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                                                                                                                                                                                       Streptomycineae; Streptomycetaceae; Streptomycee.
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Pred. No. 3.8e+02;
-JUN-2003, integrated into UniProtKB/TrEMBL
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                       01-JUN-2003, sequence version 1.
07-FEB-2006, entry version 14.
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Query Match
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Matches 5; Conserv
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SEOUENCE 118 AA:
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Munson R.S. Jr.;
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Epidemic Outbreak Surveillance (EOS);

Tibbetts C., Purkayaetha A., Su J., Russell K., Carlisle S.,
Ospina R., Reynolds T., Rowley R., Hanson E., Seto D.;

"The complete nucleotide sequence and genome organization of Human adenovirus serotype 5, field strain.";
Submitted (APR-2004) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Viruses; dsDNA viruses, no RNA stage; Adenoviridae; Mastadenovirus.
NCBI_TaxID=28285;
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/FTId=PRO 0000221918.
C7A08EA239B8FD98 CRC64;
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Hypothetical protein.
SEQUENCE 115 AA; 12210 MW; DFIB2DA239AA7F08 CRC64;
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Pred. No. 3.9e+02;
                                                                                   EMBL; J01917; -; NOT_ANNOTATED_CDS; Genomic_DNA PIR; A03862; A03862.
Hypothetical protein.
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STRAIN=EAN1pec;
US DOE Joint Genome Institute (JGI-PGF);
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Hypothetical 12 kDa early protein.
Human adenovirus 5 (HAdV-5).
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07-FEB-2006, entry version 3.
Putative cytochrome P450.
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100.0%;
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ETWFL 7
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                                                                                                                                                                                                                               SEQUENCE
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1D Q3 DX0

D4C Q3 DX1

D7 111

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Copeland A., Lucas S., Lapidus A., Barry K., Detter C., Glavina T., Hammon N., Israni S., Pitluck S., Richardson P.; "Sequencing of the draft genome and assembly of Frankia sp. EANlpec."; Submitted (JUN-2005) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Genomic sequence of an otitis media isolate of nontypeable
Haemophilus influenzae: comparative study with H. influenzae serotype
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
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PubMed=15/868074; DQI=10.1128/JB.187.13.4637-4656.2005;
Harrison A., Dyer D.W., Gillaepp A., Ray W.C., Mungur R., Carson M.B., Zhong H., Gipson J., Gipson M., Johnson L.S., Lewis L., Bakaletz L.O.
                                                                                                                                                                                                                                                      US DOE Joint Genome Institute (JGI-ORNL);
Larimer F., Land M.;
"Annotation of the draft genome assembly of Frankia sp. EANIpec.";
Submitted (JUN-2005) to the EMBL/GenBank/DDBJ databases.
-!- CAUTION: The sequence shown here is derived from an
EMBL/GenBank/DDBJ whole genome shotgun (WGS) entry which is
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Bacteria; Proteobacteria; Gammaproteobacteria; Pasteurellales;
Pasteurellaceae; Haemophilus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity 100.0%; Pred. No. 4e+02; 5; Conservative 0; Mismatches 0; Indele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 2; Length 118;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              13148 MW; 8EEA8775EFE424AD CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; AAI101000014; EAN16946.1; -; Genomic_DNA. GO; GO:0020037; F:heme binding; IEA. GO; GO:0005506; F:iron ion binding; IEA. GO; 00:0004497; F:monoxygenase activity; IEA. GO; GO:0006118; P:electron transport; IEA.
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100.0%; Pred. No. 4e+02;
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19-JUL-2005, sequence version 1.
7-FEB-2006, entry version 5.
Putative integrase/recombinase.
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GO; GO:0015074; P:DNA integration; IEA.
GO; GO:0006310; P:DNA recombination; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Interpro; IPR002397; BP450.
Interpro; IPR001128; Cytochrome_P450.
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Q4QKE8 HAEI8 PRELIMINARY; PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             d, strain KW20.";
J. Bacteriol. 187:4627-4636(2005).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRINTS; PR00359; BP450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         preliminary data
                                                                                                                                                                                    NUCLEOTIDE SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US DOE Joint Genome Institute;
Copeland A., Lucas S., Lapidus A., Barry K., Detter J.C., Glavina T.,
Hammon N., Israni S., Pitluck S., Di Bartolo G., Chain P., Schmutz J.,
Larimer F., Land M., Lykidis A., Richardson P.;
"Complete sequence of Thermobifida fusca YX.";
Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.
                                                                      -!- CAUTION: The sequence shown here is derived from an EMBL/GenBank/DDBJ whole genome shotgun (WGS) entry which is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OřřNames=Bcep1808DRAFT_1810;
Burkholderia vietnamiensis G4.
Bacteria; Proteobacteria; Betaproteobacteria; Burkholderiales;
Burkholderiaceae; Burkholderia; Gepacia cepacia NCBI_TaxID=269482;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Thermobifida fusca (strain XX).
Bacteria, Actinobacteria, Actinobacteridae, Actinomycetales,
Streptosporangineae, Nocardiopsaceae, Thermobifida.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        , DB 2; Lens
No. 4.2e+02;
0; Indels
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NCIMB 8052.";
Submitted (NOV-2005) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                              Hypothetical protein.
SEQUENCE 124 AA; 14913 MW; DAEBF01C68741D25 CRC64;
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Complete protecome; Hypothetical protein.
SEQUENCE 124 AA; 14456 WW; 5F749F9A86A83FC0 CRC64;
                                                                                                                                                                                                                                                                                                                                          EMBL; AALO01000001; EAP62267.1; -; Genomic_DNA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 124 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        55.6%; Score 5; DB 2
100.0%; Pred. No. 4.2
iive 0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13-SEP-2005, sequence version 1. 07-FEB-2006, entry version 4. Hypothetical protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OrderedLocusNames=Tfu_0669;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 55.6
Best Local Similarity 100.
Matches 5; Conservative
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                                                                                                                                             preliminary data.
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Q4BDII;
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Q47S60;
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Matches
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   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The genome sequence of an anaerobic aromatic-degrading denitrifying
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN=NCIMB 8052;
US DOE Joint Genome Institute (JGI-ORNL);
Larimer F., Land M.;
"Annotation of the draft genome assembly of Clostridium beijerincki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRAIN=NCIMB 8052;
US DOB Joint Genome Institute (JGI-PGF);
US DOB Joint Genome Institute (JGI-PGF);
Copeland A., Lucas S., Lapidus A., Barry K., Detter J.C., Glavina Hammon N., Israni S., Pilluck S., Richardson P.;
"Sequencing of the draft genome and assembly of Clostridium beijerincki NCIMB 8052.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10-3AN-2006, integrated into UniProtKB/TrEMBL.
10-JAN-2006, sequence version 1.
07-FBB-2006, entry version 3.
Hypothetical protein.
ORFNames-CheinDART 4859,
Clostridium beijerIncki NCIMB 8052.
Bacteria; Firmicutes; Clostridia, Clostridiales; Clostridiaceae;
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Rabus R., Kube M., Heider J., Beck A., Heitmann K., Widdel F..
Reinhardt R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Azoarcus sp. (strain EbN1).
Bacteria; Proteobacteria; Betaproteobacteria; Rhodocyclales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 2; Length 122;
   Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; CRSS5306; CA107454.1; -; Genomic DNA.
Complete proteome; Hypothetical protein.
SEQUENCE 122 Aa; 13581 MW; 18B790A94ECD3255 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4.1e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OrderedLocusNames=AZOSEA13290; ORFNames=ebA2387;
                                                                                                                                                                                                                                                                                                                                                                                                                 04-JAN-2005, integrated into UniProtKB/TrEMBL.
04-JAN-2005, sequence version 1.
07-EBB-2006, entry version 8.
Hypothetical protein.
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                                                                                                                                                                                                                                                                                                                                              122 AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              55.6%; Score 5; DB 2
100.0%; Pred. No. 4.1
:ive 0; Mismatches
   Mismatches
                                                                                                                                                                                                                                                                                                                                          OSPSF8_AZOSE PRELIMINARY; PRT;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            bacterium, strain EbN1.";
Arch. Microbiol. 183:27-36(2005).
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Bost Local Similarity luv...
Si Conservative
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NCBI_TaxID=76114;
   Conservative
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NCBI_TaxID=290402;
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OZWAHB
CLC
10 DXWH
AC QZWWH
DT 10-JA
DT 10-JA
DT 07-FE
DE HYPOTO
CO BACTE
OC BACTE

   Matchee
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OS PSE 8

OS PSE
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Gaps

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-!- SUBCELLULAR LOCATION: Bacterial cell inner membrane; multi-pass
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55
91
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Q6T1W1 ANETH
ID O6T1W1 AN
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Matches
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                                                                                                                                                                                                                                                                     Larimer F., Land M., "Annotation of the draft genome assembly of Burkholderia vietnamiensis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRAIN=SCRI 1043 / ATCC BAA-672;
PubMed=15263089; DOI=10.1073/pnas.0402424101;
Ball K.S., Sebaihia M., Pritchard L., Holden M.T.G., Hyman L.J.,
Holeva M.C., Thomson N.R., Bentley S.D., Churcher L.J.C., Mungall K.,
Atkin R., Bason N., Brooks K., Chillingworth T., Clark K., Doggett J.,
Fraser A., Hance Z., Hauser H., Jagels K., Moule S., Norbertczak H.,
Ormond D., Price C., Quail M.A., Sanders M., Walker D., Whitehead S.,
Salmond G.P.C., Birch P.R.J., Parkhill J., Toth I.K.;
"Genome sequence of the enterobacterial phytopathogen Erwinia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                           Copeland A., Lucas S., Lapidus A., Barry K., Detter C., Glavina T., Hammon N., Israni S., Pitluck S., Richardson P.; "Sequencing of the draft genome and assembly of Burkholderia vietnamiensis G4.";
                                                                                                                                                                                                                                                                                                                                                                                                                                     Copeland A., Lucas S., Lapidus A., Barry K., Detter C., Glavina T., Hammon N., Israni S., Pitluck S., Richardson P., Submitted (JUN-2005) to the EMBL/GenBank/DDBJ databases.

-!- CAUTION: The sequence shown here is derived from an EMBL/GenBank/DDBJ whole genome shotgun (WGS) entry which is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Erwinia carotovora subsp. atroseptica (Pectobacterium atrosepticum).
Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
Enterobacteriaceae; Pectobacterium.
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                                                                                                                                                                                                                                                                                                                                    Submitted (JUN-2005) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                Submitted (JUN-2005) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hypothetical protein. SEQUENCE 126 AA; 14044 MW; A743CE0B7C1547BE CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Proc. Natl. Acad. Sci. U.S.A. 101:11105-11110(2004)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              05-JUL-2005, integrated into UniProtKB/Swiss-Prot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 2; Ler
5. 4.2e+02;
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US DOE Joint Genome Institute (JGI-ORNL);
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TIGRFAMB; TIGR02246; Cons_hypoth_2246; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                      DOE Joint Genome Institute (JGI-PGF);
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Name=crcB; OrderedLocusNames=ECA1295;
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100.0%; Pre
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Best Local Similarity
5; Conserve
[1]
NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                         NUCLEOTIDE SEQUENCE.
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Q6D7N0;
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                                         STRAIN=G4
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                                                                Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms
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Distributed under the Creative Commons Attribution-NoDerivs License
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                                                                                         Distributed under the Creative Commons Attribution-NoDerivs License
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Xenopus tropicalis (Western clawed frog) (Silurana tropicalis).
Skaryvota, Metazoa; Chordata, Craniata, Vertebrata, Euteleostomi,
Amphibia; Batrachia, Aunra; Mesobatrachia; Pipoidea; Pipidae;
Xenopodinae; Xenopus; Silurana.
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Pred. No. 4.3e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Vempati U.D., King M.L.;
Submitted (APR-2000) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                              Potential.
ADED63C701397633 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pfam; PF05741; zf-nanos; 1.
SEQUENCE 128 AA; 14140 MW; E79556DEF1C0880B CRC64;
                                                                                                                                                                                                                                                                                                   Protein crcB homolog /FTId=PRO_0000110100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; AF256086; AAK49295.1; -; mRNA.
GO; GO:0003723; F:RNA binding; IEA.
GO; GO:0008270; F:zinc ion binding; IEA.
GO:0006445; P:regulation of translation; IEA.
InterPro; IPR008705; Nanos_RNA_bd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4.3e+02;
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                                                                                                                                                                                                                                                                                Complete proteome; Inner membrane; Membrane; CHAIN 1 127 Protein crcB hom
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100.0%; Pred. No...
0; Mismatches
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                                                                                                                               EMBL; BX950851; CAG74205.1; -; Genomic_DNA. GenomeReviews; BX950851_GR; ECA1295.
HAMAP; MF 00454; -; 1.
PITERPRO'S IPR003591; Camphor_CrcB.
Pfam; PF02537; CRCB; 1.
TIGREAMS; TIGR00494; crcB; 1.
                 -!- SIMILARITY: Belongs to the crcB family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Mismatches
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Potential
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membrane protein (By similarity
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13391 MW;
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Q82HV8_STRAW
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Distributed under the Creative Commons Attribution-NoDerivs License
                                                                                                                                                                                                                                                                              Schaffer C., Messner P.; "Schaffer C., Messner P.; "Surface-layer glycoproteins: an example for the diversity of bacterial glycosylation with promising impacts on nanobiotechnology."; Glycobiology 14:31R-42R(2004).
                                                                                                                                                                                                                                                                                                                                                                                                                                          Novotny R., Pfoestl A., Messner P., Schaffer C.; "Genetic organization of chromosomal S-layer glycan biosynthesis loci of Bacillaceae.";
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US DOE Joint Genome Institute (JGI-ORNL);
Larimer F., Land M.;
"Annotation of draft genome assembly of Kineococcus radiotolerans
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Copeland A., Lucas S., Lapidus A., Barry K., Detter C., Glavina
Hammon N., Israni S., Pitluck S., Richardson P.;
"Sequencing of the draft genome and assembly of Kineococcus
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07-FEB-2006, entry version 3.
Hypothetical protein.
Hypothetical protein.
Kineococcus radiocolerans SRS30216.
Bacteria; Actinobacteria; Actinobacteriaes; Frankineae; Kineosporiaceae; Kineococcus.
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                                                                                                         Aneurinibacillus thermoaerophilus.
Bacteria, Firmicutes, Bacillales, Paenibacillaceae,
Aneurinibacillus group, Aneurinibacillus.
NCBI_TaxID=143495;
                 05-JUL-2004, integrated into UniProtKB/TrEMBL.
05-JUL-2004, sequence version 1.
21-FEB-2006, entry version 16.
Putative transposase.
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                                                                                                                                                                                                                                        STRAIN=L420-91T;
PubMed=15044388; DOI=10.1093/glycob/cwh064;
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Best Local Similarity 10v.v.
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NUCLEOTIDE SEQUENCE.
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NUCLEOTIDE SEQUENCE.
NUCLEOTIDE SEQUENCE.
NEDALINES-1633832; PUDMEd=11772643; DOI=10.1128/AEM.68.1.335-345.2002;
Beja O., Koonin E.V., Aravind L., Taylor L.T., Seitz H., Stein J.L.,
Bensen D.C., Feldman R.A., Swanson R.V., DeLong E.F.;
Homesen D.C., Feldman R.A., Swanson R.V., DeLong E.F.;
Homesen D.C., Feldman R.A., Swanson R.V., DeLong E.F.;
Homesen D.C., Stein J.L., Stein J.L.,
Homesen D.C., Stein J. Stein J.L.,
Homesen D.C., Stein J. Ste
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US DOE Joint Genome Institute (JGI-PGF);
Copeland A., Lucas S., Lapidus A., Barry K., Detter C., Glavina T., Hammon N., Israni S., Pitluck S., Richardson P.;
Submitted (JUN-2005) to the BMBL/GenBank/DDBJ databases.
-!- CAUTION: The sequence shown here is derived from an EMBL/GenBank/DDBJ whole genome shotgun (WGS) entry which is
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SRS30216.";
Submitted (JUN-2005) to the EMBL/GenBank/DDBJ databases.
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SEQUENCE 134 AA; 15058 MW; F037BBE97A0D4676 CRC64;
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SEQUENCE 136 AA; 15922 MW; 852D6DDIB1626B5C CRC64;
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marine archaeal group 1.
NCBI_TaxID=166279;
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0977K8;
01-DEC-2001, integrated into UniProtKB/TrEMBL.
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07-FEB-2006, entry version 9.
Secreted protein.
uncultured crenarchaeote 74A4.
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Matches 5; Conservative
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41 TWFLR 45
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PRT;
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Q4NBAQ 9MICC
ID QANBAQ 9MICC PRELIMINARY;
AC Q4NBAQ 7000 into
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Best Local Similarity
Matches 5; Conserv
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Best Local Similarity
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                                                    1 VETWF 5
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Distributed under the Creative Commons Attribution-NoDerivs License
                                                                                                                                                                                                                WUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].
STRAIN=MA-4680 / ATCC 31267 / NCIMB 12804 / NRRL 8165;
MEDLINE=22608306; PubMed=12059562; Dol=10.1038/nbt820;
Ikeda H., Ishikawa J., Hanamoto A., Shinose M., Kikuchi H., Shiba T., Sakaki Y., Hattori M., Omura S.;
"Complete genome sequence and comparative analysis of the industrial microorganism Streptomyces avermitilis.";
Nat. Biotechnol. 21:526-531(2003).
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                                                                        WUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].
STRAIN=MA-4680 / ATCC 31267 / NCIMB 12804 / NRL 8165;
MEDLINE=21477403; PubMed=11572948; DOI=10.1073/pnas.211431198;
GMULA S., IXeda H., ISHIKAWA J., Hanamoto A., Takahashi C.,
Shinose M., Takahashi Y., Horikawa H., Nakazawa H., Osonoe T.,
Kikuchi H., Shiba T., Sakaki Y., Hattorin M.;
"Genome sequence of an industrial microorganism Streptomyces
avermitis: deducing the ability of producing secondary
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                         Bacteria; Actinobacteria; Actinobacteridae; Actinomycetales;
Streptomycineae; Streptomycetaceae; Streptomyces.
                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 2; Length 136;
3. 4.5e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Indels
                                                                                                                                                                                                                                                                                                                                                                         EMBL; BA000030; BAC71112.1; -; Genomic_DNA.
BloCyc; SAVE227882:SAV3400-MONOMER; -.
Complete proceeome; Hypothetical protein .
SEQUENCE 136 AA; 14797 MW; BAIEIAID59C1F6F3 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 1
137 137
137 AA; 15234 MW; D44510A09BD948C0 CRC64;
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27-SEP-2005, integrated into UniProtKB/TrEMBL.
27-SEP-2006, sequence version 1.
07-FEB-2006, entry version 3.
Putative dissimilatory nitrite reductase (Fragment).
                                                                                                                                                                                            Proc. Natl. Acad. Sci. U.S.A. 98:12215-12220(2001).
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100.0%; Pred. No. 4.5
ive 0; Mismatches
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GO; GO: GOSSO7; F: copper ion binding; ĪEA.
THERPEO; IPRO01117; Cu-oxidase.
Pfam; PPO0394; Cu-oxidase; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q3Y4H2_9BACT PRELIMINARY;
 OrderedLocusNames=SAV3400;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best_Local Similarity 100.
Matches 5, Conservative
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11 FLRHP 15
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                                                    NCBI_TaxID=33903;
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                                                                                                                                                                               metabolites.";
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-!- MISCELLANBOUS: The sequence shown here is derived from an EMBL/GenBank/DDBJ third party annotation (TPA) entry.
                                                                              Gaps
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US DOE Joint Genome Institute (JGI-PGF);
Copeland A., Lucas S., Lapidus A., Barry K., Detter C., Glavina T.,
Hammon N., Israni S., Pitluck S., Richardson P.;
"Sequencing of the draft genome assembly of Arthrobacter sp. FB24.";
Submitted (JUN-2005) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PubMed=14709175; DOI=10.1186/gb-2003-5-1-r3;
Hild M., Beckmann B., Haas S.A., Koch B., Solovyev V., Busold C.
Fellenberg K., Boutros M., Vingron M., Sauer F., Hoheisel J.D.,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Drosophila melanogaster (Fruit fly).
Eukaryota, metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroidea; Drosophilidae; brosophila.
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Arthrobacter sp. FE24.
Bacteria, Actinobacteria, Actinobacteridae, Actinomycetales,
Micrococcineae, Micrococcaceae, Arthrobacter.
NCBI_TaxID=290399;
55.6%; Score 5; DB 2; Length 137; 100.0%; Pred. No. 4.5e+02; ive 0; Mismatches 0; Indels
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SEQUENCE 139 AA; 14909 MW; DBA4F99D68E4045D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 05-JUL-2004, integrated into UniProtKB/TrEMBL.
05-JUL-2004, sequence version 1.
07-FEB-2006, entry version 8.
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Name=nirK;
uncultured bacterium.
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uncultured bacterium.
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Q3Y4M6_9BACT
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Q3Y4P7 9BA
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                                                                                                                                                                                                                              Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms Distributed under the Creative Commons Attribution-NoDerivs License
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Bukaryota, Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; BEP clade;
Ehrhartoideae; Oryzeae; Oryza.
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                                        Larimer F., Land M.;
"Annotation of the draft genome assembly of Arthrobacter sp. FB24.",
submitted (JUN-2005) to the EMBL/GenBank/DDBJ databases.
-!- CAUTION: The sequence shown here is derived from an
EMBL/GenBank/DDBJ whole genome shotgun (WGS) entry which is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Go, GO:0005634; C:nucleus; IEA.
GO; GO:0005634; C:nucleus; IEA.
GO; GO:0006155; P:regulation of transcription, DNA-dependent; IEA.
InterPro.; IPRO:3822; PAH:
Pfam; PF02671; PAH; 1.
Hypothetical protein.
SEQUENCE 140 AA; 16304 MW; 2476A657CIC2FC74 CRC64;
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"Oryza sativa nipponbare(GA3) genomic DNA, chromosome 8, BAC clone:OSJNBa0062005.";
Submitted (JUL-2002) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                 EMBL, AAHGO1000023; EAL94631.1; -; Genomic_DNA.
GO, GO.0005409; F:electron transporter activity; IEA.
GO, GO.0006118; P:electron transporter activity; IEA.
GO, GO.0006118; P:electron transport, IEA.
InterPro; IPR011915; GIrX actino.
InterPro; IPR006662; Thiored.
InterPro; IPR006663; Thiored.
RINTS; PR0421; THIOREDOXIN.
TIGRFAMS; TIGR02200; GIrX actino; 1.
PROSITE; PS00194; THIOREDOXIN; UNKNOWN 1.
SEQUENCE 139 AA; 14842 MW; 188B6C466BBDGE6 CRC64;
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                     US DOE Joint Genome Institute (PGF-ORNL);
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07-FBB-2006, entry version 8.
Hypothetical protein OSJNBa0062G05.18.
Name=OSJNBa0062G05.18;
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Matches 5; Conservative
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Distributed under the Creative Commons Attribution-NoDerivs License
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                                                                                                                                                                                                                     Santoro A.E., Boehm A.B., Francis C.A.; "Denitrifier community composition along a nitrate and salinity gradient in a coastal aquifer."; Appl. Environ. Microbiol. 0:0-0(2006).
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                                 27-SEP-2005, integrated into UniProtKB/TrEMBL.
27-SEP-2005, sequence version 1.
07-FEB-2006, entry version 3.
Putative dissimilatory nitrite reductase (Fragment).
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Pred. No. 4.6e+02;
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100.0%; Pred. No. ...
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EMBL; DQ159738; AAZ83854.1; -; Genomic_DNA.
GQ; GQ:0005507; F:copper ion binding; TEA.
InterPro.; IPR001117; Cu-oxidase.
NON TER 10 140
SEQUENCE 140 AA; 15544 MW; 3D1C65CE173B
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EMBL; DQ159790; AAZ83904.1; -; Genomic_DNA.
EMBL; DQ159750; AAZ83866.1; -; Genomic_DNA.
GQ). GO:0005507; F:copper ion binding; IEA.
InterPro; IPR001117; Cu-oxidase.
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NCBI_TaxID=77133;
                                                                                                                                                  Bacteria; environmental samples.
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Q3 Y4P7 9BACT PRELIMINARY;
Q3 Y4P7;
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PRELIMINARY;
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Santoro A.B., Boehm A.B., Francis C.A.;
Santoro A.B., Boehm A.B., Francis C.A.;
"Denitrifier community composition along a nitrate and salinity gradient in a coastal aquifer.";
Appl. Environ. Microbiol. 0:0-0(2006).
                                                                                                                                                                                                                                       Query Match 55.6%; Score 5; DB 2; Length 140; Best Local Similarity 100.0%; Pred. No. 4.6e+02; Matches 5; Conservative 0; Mismatches 0; Indels
                                                                                                                               140 140 140 140 AM; 3CC71550667E6AEA CRC64;
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27-SEP-2005, sequence version 1.
07-FEB-2006, entry version 3.
Putative dissimilatory nitrite reductase (Fragment).
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Best Local Similarity 100.0%; Pred. No. 4.6e+02;
Matches 5; Conservative 0; Mismatches 0;
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GO; GO:0005507; F:copper ion binding; ĪEA.
InterPro; IPR001117; Cu-oxidase.
PĒam; PF00394; Cu-oxidase; 1.
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       InterPro; IPR001117; Cu-oxidase.
Pfam; PF00394; Cu-oxidase; 1.
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SEQUENCE 140 AA; 15616 MW; 30
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Bacteria; environmental samples.
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Q3Y4Q4;
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tive 0; Mismatches 0; Indels . 0; Gaps
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Santoro A.E., Boehm A.B., Francis C.A.;
"Denitrifier community composition along a nitrate and salinity gradient in a coastal aquifer.";
Appl. Environ. Microbiol. 0:0-0(2006).
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                                               Length 140;
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27-SEP-2005, sequence version 1.
07-FEB-2006, entry version 3.
Putative dissimilatory nitrite reductase (Fragment).
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                                   55.6%; Score 5; DB 2; Ler 100.0%; Pred. No. 4.6e+02; ive 0; Mismatches 0;
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GO; GO:0005507; F:copper ion binding; IEA.
InterPro; IPR001117; Cu-oxidase.
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uncultured bacterium.
Bacteria; environmental samples.
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NCBI_TaxID=77133;
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RESULT 2 1417 154077 154077 154077 154077 154077 154077 154077 154077 154077 154077 154077 155046252.12 155046252.	Query Match Best Local Similarity 100.0%; Pred. No. 37; Matches 5; Conservative 0; Mismatches 0; Indels 0; Gaps 0; Qy 3 TWFLR 7 Qy Db 30 TWFLR 34 RESULT 4 H69950 mutator District District December 1: Albertini, A.M.; Alloni, G.; Bertert C; Decession: H69850 mutator 1: Albertini, A.M.; Alloni, G.; Bertert C; Decession: N.; Moszer, I.; Albertini, A.M.; Alloni, G.; Azevedo, V.; Bertert C; Bron, S.; Broulllet, S.; Bruschi, C.V.; Caldwell, B.; Capuano, V.; Carter, N.M.; Choi A; Ehrlich, S.D.; Emmerson, P.T.; Entian, K.D.; Errington, J.; Fabret, C.; Ferrari, E. Nature 390, 249-256, 1997 A; Authors: Foulger, D.; Fritz, C.; Fujita, M.; Fujita, Y.; Fuma, S.; Galizzi, A.; Gallert iech, J.; Harwood, C.R.; Henaut, A.; Hilbert, H.; Holsappel, S.; Hosono, S.; Hullo, M.F.;
hypothetical prote conserved hypothet nypothetical prote hypothetical prote conserved hypothet ig kappa chain pre hypothetical prote) '92 #text_change 09-Jul-2004 '9-Dong, J.; Yen, C.E.; Kelly, M.M.; Bull 18-2 genome. 7142161 0001392B5 '; Length 115; 0; Indels 0; Gaps 0;
103	RESULT 1 A03862 hypothetical protein E-115 - human adenovirus 2 C;Species: Mastadenovirus h2 (human adenovirus 2) C;Species: Janar-1992 #sequence_revision 31-Mar-1992 #text C;Accession: A03862 R;Gingeras, T.R.; Sciaky, D.; Gelinas, R.E.; Bing-Dong, J. Biol. Chem. 257, 13475-13491, 1982 A;Title: Nucleotide sequences from the adenovirus-2 geno A;Reference number: A92351; MUID:83056843; PMID:7142161 A;Molecule type: DMA A;Residues: 1-115 cdIN> A;Residues: 1-115 cdIN> A;Cross-references: UNIPROT:P03290; UNIPARC:UPI00001392B Cuery Match Best Local Similarity 100.0%; Pred. No. 27; Matches 5; Conservative 0; Mismatches 0; I

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                   Afauthors: Lauber, J.; Lazarevic, V.; Lee, S.M.; Levine, A.; Liu, H.; Masuda, S.; Maueelly, M.; Ogawa, K.; Ogiwara, A.; Oudega, B.; Park, S.H.; Parro, V.; Pohl, T.M.; Portetells Rieger, M.; Rivolta, C.; Roche, E.; Roche, B.; Rose, M.; Sadaie, Y.; Sato, T.; Scanlon, A.; Authors: Schleich, S.; Schroeter, F.; Schguchi, J.; Sekowska, A.; Seror akeuchi, M.; Tamakoshi, A.; Tanaka, T.; Terpetra, P.; Tognoni, A.; Tosato, V.; Uchiyama, T.; Winters, P.; Yamamoto, H.; Yamane, K.; Yasumoto, K.; Yata, K.; Yoshida, R.; Althors: Yoshikawa, H.F.; Zumatein, E.; Yoshikawa, H.; Danchin, A.
A.; Reference number: A69580; MUID:98044033; PMID:9384377
A; Accession: H69850
A; Status: preliminary; nucleic acid sequence not shown; translation not shown
A; Residues: 1-170 «KUN»
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A;Experimental source: strain 168
C;Genetics:
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A;Cross-references: UNIPROT:Q00844; UNIPARC:UPI0000002ECF; GB:D10979; DDBJ:D01164; NID:g
C;Superfamily: maize stripe virus major noncapsid protein
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R;Chambaud, I.; Heilig, R.; Ferris, S.; Barbe, V.; Samson, D.; Galisson, F.; Moszer, I.;
Nucleic Acids Res. 29, 2145-2153, 2001
A;Title: The complete genome sequence of the murine respiratory pathogen Mycoplasma pulm A;Reference number: A99512; MUID:21267165; PMID:11353084
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C;Species: Mycoplasma pulmonis
C;Date: 24-May-2001 #sequence_revision 24-May-2001 #text_change 09-Jul-2004
     Lardinois
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A;Molecule type: DNA
A;Residues: 1-196 <KUL>
A;Residues: 1-196 <KUL>
A;Experimental source: strain UAB CTIP
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C,Date: 17-Apr-1993 #sequence_revision 17-Apr-1993 #text_change 09-Jul-2004
C,Accession: JQ1547
R,Zhu, Y.; Hayakawa, T.; Toriyama, S.
J. Gen. Virol. 73, 1309-1312, 1992
A,Title: Complete nucleotide sequence of RNA 4 of rice stripe virus isolate T, A;Reference number: JQ1547; MUID:92268894; PMID:1588328
Koetter, P.; Koningstein, G.; Krogh, S.; Kumano, M.; Kurita, K.; Lapidus, A.;
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Matches 5; Conservative
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A;Genetic code: SGC3
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A;Residues: 1-208 <HEN>
A;Cross-references: UNIPROT:076574; UNIPARC:UP1000007CD7A; EMBL:AF077534; PIDN:AAC26289.1
A;Experimental source: strain Bristol N2; clone K07D4
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A;Experimental source: strain A3(2)
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A;Reference number: Z21581
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                                                                                                                                                                                                                                                                                      hypothetical protein K07D4.5 - Caenorhabditis elegans C;Species: Caenorhabditis elegans C;Species: Caenorhabditis elegans C;Date: 29-Oct.1999 #sequence_revision 29-Oct-1999 #text_change 31-Dec-2004 C;Accession: T33341 wohldmann, P. submitted to the EMBL Data Library, July 1998 A;Description: The sequence of C. elegans cosmid K07D4.
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C;Species: Streptomyces coelicolor
C;Date: 05-Nov-1999 #sequence_revision 05-Nov-1999 #text_change 09-Jul-2004
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Length 196;
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C;Superfamily: ompR protein; response regulator homology
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A;Molecule type: DNA
     DB 2;
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0; Mismatches
                                                         0; Mismatches
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A;Introns: 25/3; 68/1; 127/1; 160/2
                              100.0%;
                                                       5; Conservative
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Query Match
Best Local Similarity
Matches 5; Conserv
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nes 5; Conserv
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ETWFL 86
                                                                                                           2 ETWFL 6
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Query Match 55.6
Best Local Similarity 100.
Matches 5; Conservative
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Best Local Similarity 100.
Matches 5, Conservative
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Best Local Similarity
Matches 5; Conserv
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A.Authors: Parry, C.; Quail, M.; Rutherford, K.; Simmonds, M.; Skelton, J.; Stevens, K.; A; Reference number: AB0502; MuID:21534947; PMID:11677608
A.Accession: AF0656
A.Accession: AF0656
A.Accession: Preliminary
A.Accession: L235 <PAR>
R;Nierman, W.C.; Feldblyum, T.V.; Paulsen, I.T.; Nelson, K.E.; Eisen, J.; Heidelberg, J. B.; Laub, M.T.; DeBoy, R.T.; Dodson, R.J.; Durkin, A.S.; Gwinn, M.L.; Haft, D.H.; Kolon n. J.; Ermolaeva, M.; White, O.; Salzberg, S.L.; Shapiro, L.; Venter, J.C.; Fraser, C.M. Proc. Nall. Acad. Sci. US.A. 98, 4136-4141, 2001
A;Title: Complete Genome Sequence of Caulobacter crescentus.
A;Reference number: A87249; MUID:21173698; PMID:11259647
                                                                                                                                                                                                             A;Status: preliminary
A;Molecule type: DNA
A;Rosaidues: 1-224 <STO>
A;Crosacreferences: UNIPROT:Q9A3B2; UNIPARC:UPI0000C7A0F; GB:AE005673; NID:g13424986;
C;Genetics:
A;Gene: CC3292
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C;Species: Caenorhabditis elegans
C;Date: 10-May-2001 #sequence_revision 10-May-2001 #text_change 09-Jul-2004
C;Accession: C8839
R;anonymous, The C. elegans Sequencing Consortium.
Science 282, 2012-2018, 1998
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A;Map position: 5
C;Superfamily: Caenorhabditis transposon Tc1 hypothetical 32K protein
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100.0%; Pred. No. 47;
tive 0; Mismatches
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Best Local Similarity
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Matches 5; Conserv
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97 WFLRH 101
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A;Cross-references: UNIPARC:UP1000059F2E; GB:AL513382; PIDN:CAD01623.1; PID:g16502477; C
C;Genetics:
A;Gene: STY1354
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Cibate: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 09-Jul-2004
Cibacession: T27636
Ribentley, D. Bara Library, October 1995
Aibertled to the EMBL Data Library, October 1995
Aibertled to the sequence of C. elegans cosmid ZC64.
Aibeference number: Z20397
Aibertles: preliminary; translated from GB/EMBL/DDBJ
Aibolecule type: DNA
Aibertles: DNA
Aibertles: 1-241 <br/>Aibertles: UNIPROT:Q23379; UNIPARC:UPI0000081BA9; EMBL:U39740; PIDN:AAA80427.1;
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A;Status: preliminary
A;Molecule type: DNA
A;Molecule type: DNA
A;Rosiduse: 1-244 (KUR>
A;Cross-references: UNIPROT:034170; UNIPARC:UPI00000D1464; GB:AE008688; PIDN:AAL41575.1;
A;Experimental source: strain C58 (Dupont)
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A,Title: The Genome of the Natural Genetic Engineer Agrobacterium tumefaciens
A,Reference number: AB2577; MUID:21608550; PMID:11743193
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C;Superfamily: Caenorhabditis transposon Tc1 hypothetical 32K protein
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                                                                                             Length 235;
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100.0%; Pred. No. 50;
tive 0; Mismatches
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100.0%; Pred. No. 51;
iive 0; Mismatches
                                                                                             Score 5; DB 2;
Pred. No. 49;
                                                                                  55.6%; bcc.
100.0%; Pred. No. ...
... 0; Mismatches
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A,Map position: circular chromosome
C,Superfamily: rod protein flgF
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A; Status: nucleic acid sequence not shown; translation not shown
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Best Local Similarity
Matches 5; Conserv
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20 WFLRH 24
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                                                                                     figs protein (U95165) [imported] - Agrobacterium tumefaciens (strain C58, Cereon)
C; Species: Agrobacterium tumefaciens
C; Species: Agrobacterium tumefaciens
C; Species: O3-Sep-2001 #sequence_revision 30-Sep-2001 #text_change 05-Oct-2004
C; Accession: A97427
R; Goodner, B.; Hinkle, G.; Gattung, S.; Miller, N.; Blanchard, M.; Qurollo, B.; Goldman, A; Liu, F.; Wollam, C.; Allinger, M.; Doughty, D.; Scott, C.; Lappas, C.; Markelz, B.; A; Title: Genome Sequence of the Plant Pathogen and Biotechnology Agent Agrobacterium tum A; Reference number: A97359; MUD:21608551; PMID:11743194
A; Restuus: preliminary
A; Molecule type: DNA
A; Residues: 1-244 <KUR>
C; Genetics:
C; Genetics:
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C;Species: Synechocystis sp.
C;Species: Synechocystis sp.
C;Species: Synechocystis sp.
C;Date: 25-Apr-1997 #sequence_revision 25-Apr-1997 #text_change 09-Jul-2004
C;Accession: S75903
C;Accession: S75903
C;Accession: S75903
C;X;Ovimura, S;Shimpo, S;; Tahaka, A;; Asamizu, E;; Nakamura, Y;; Miyajima, N;
O, K;;Ovimura, S;; Shimpo, S;; Takeuchi, C;; Wada, T;; Watanabe, A; Yamada, M;; Yasuda
DNA, Res. 3, 109-136, 1996
A;Title: Sequence analysis of the genome of the unicellular cyanobacterium Synechocystis
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A;Residues: 1-247 <KAN>
A;Cross-references: UNIPROT:P74268; UNIPARC:UPI00001290CE; EMBL:D90913; GB:AB001339; NIC
A;Note: the nucleotide sequence was submitted to the EMBL Data Library, June 1996
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Cispecies: L2-Sep-1997 #sequence_revision 17-Sep-1997 #text_change 09-Jul-2004
Cistore 12-Sep-1997 #sequence_revision 17-Sep-1997 #text_change 09-Jul-2004
Cistore 27-Sep-1997
Airle: The complete genome sequence of Escherichia coli K-12.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Indels
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hypothetical protein b1669 - Escherichia coli (strain K-12)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Reference number: S74322; MUID:97061201; PMID:8905231
A;Accession: S75903
A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       55.6%; Score 5; DB 2;
100.0%; Pred. No. 51;
tive 0; Mismatches
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100.0%; Pred. No. 51;
tive 0; Mismatches
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A,Map position: circular chromosome
C,Superfamily: rod protein flgF
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Best Local Similarity 100.
Matches 5; Conservative
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Best Local Similarity 100.
Matches 5; Conservative
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209 FLRHP 213
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A Molecule type: DNA
**Residues: 1-270 <BLAT>
**Residues: 1-270 <BLAT>
**A;Residues: 1-270 <BLAT>
**A;Residues: 1-270 <BLAT>
**A;Cross-references: UNIPROT: P77147; UNIPARC: UPI000013A9BC; GB:AE000262; GB:U00096; NID:g1
**A;Experimental source: strain K-12; substrain MG1655
C;Superfamily: Bscherichia coli hypothetical protein b1669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R; Perna, N.T.; Plunkett III, G.; Burland, V.; Mau, B.; Glasner, J.D.; Rose, D.J.; Mayhew, iller, L.; Grotbeck, E.J.; Davis, N.W.; Lim, A.; Dimalanta, E.; Potamousis, K.; Apodaca, Marture 409, 529-533, 2001
A; Pitle: Genome sequence of enterohemorrhagic Escherichia coli 0157:H7.
A; Reference number: A85480; MUID:21074935; PMID:11206551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Residues: 1.270 <STO>
A;Cross-references: UNIPROT:Q8X618; UNIPARC:UPI0000D0C14; GB:AE005174; NID:g12515668; PJ
A;Experimental source: strain 0157:H7, substrain EDL933
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B;B-Jul-2001 #sequence_revision 18-Jul-2001 #text_change 09-Jul-2004
C;Accession: H90925
R;Hayashi, T.; Makino, K.; Ohnishi, M.; Kurokawa, K.; Ishii, K.; Yokoyama, K.; Han, C.G., gasawara, N.; Yasunaga, T.; Kuhara, S.; Shiba, T.; Hattori, M.; Shinagawa, H.
A;Title: Complete genome sequence of enterohemorrhagic Escherichia coli O157:H7 and genom A;Reference number: A99629; MUID:21156231; PMID:11258796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            nypothetical protein 22696 [imported] - Escherichia coli (strain O157:H7, substrain EDL95
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A;Molecule type: DNA
A;Residues: 1.270 c.HAY>
A;Residues: 1.270 c.HAY>
A;Cross.references: UNIRROT:08X618; UNIPARC:UPI0000DD0C14; GB:BA000007; PIDN:BAB35799.1;
A;Experimental source: strain 0157:H7, substrain RIMD 0509952
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C;Date: 16-Feb-2001 #sequence_revision 16-Feb-2001 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                     0; Gaps
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C,Superfamily: Escherichia coli hypothetical protein b1669
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Gaps

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0; Indels

Length 296;

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A,Accession: G65002
A,Status: preliminary; nucleic acid sequence not shown; translation not shown
A,Molecule type: DNA
A,Residues: 1-296 <BLAT>
A,Residues: 1-296 <BLAT>
A,Cross-references: UNIPROT: P77768; UNIPARC: UPI0000047C8B; GB:AE000319; GB:U00096; NID:g1
A,Experimental source: strain K-12, substrain MG1655
C,Superfamily: human PML-1 protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        hypothetical protein K07C6.14 - Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Bate: 29-Oct-1999 #sequence_revision 29-Oct-1999 #text_change 09-Jul-2004
C;Accession: T32681
R;Wagner-McPherson, C; Gillam, B.
Submitted to the EMBL Data Library, December 1997
A;Description: The sequence of C. elegans cosmid K07C6.
A;Reference number: Z21209
A;Accession: T32681
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Residues: 1-300. cWAGA
A;Residues: 1-300. cWAGA
A;Residues: 1-300. cWAGA
A;Residues: I-300. cWAGA
A;Caeser-references: UNIPROT:O44645; UNIPARC:UPI0000079677; EMBL:AF039049; PIDN:AAB94256.1
A;Experimental source: strain Bristol N2; clone K07C6
C;Genetics:
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Cypecies: Haug-1995 #sequence_revision 18-Aug-1995 #text_change 09-Jul-2004
Cypecession: D64122
RyFleischmann, R.D.; Adams, M.D.; White, O.; Clayton, R.A.; Kirkness, E.F.; Kerlavage, A.; Gocayne, J.D.; Soctt, J.; Shirley, R.; Liu, L.I.; Glodek, A.; Kelley, J.M.; Weidman, J.
D.M.; Brandon, R.C.; Fine, L.D.; Fritchman, J.L.; Fuhrmann, J.L.; Geoghagen, N.S.M.
Science 269, 496-512, 1995
A, Muthors: Gnehm, C.L.; McDonald, L.A.; Small, K.V.; Fraser, C.M.; Smith, H.O.; Venter, C.A.; A, Title: Whole-genome random sequencing and assembly of Haemophilus influenzae Rd.
A, Reference number: A64000; MUID:95350630; PMID:7542800
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A;Gene: CESP:K07C6.14
A;Map position: 5
C;Superfamily: Caenorhabditis transposon Tc1 hypothetical 32K protein
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A, Reference number: A64720; MUID: 97426617; PMID: 9278503
                                                                                                                                                                                                                                                                                               Query Match 55.6%; Score 5; DB 2; Best Local Similarity 100.0%; Pred. No. 60; Matches 5; Conservative 0; Mismatches
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D64122
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A,Molecule type: DNA
A,Residues: 1-296 c.HAY>
A,Fesidues: 1-296 c.HAY>
A,Cross-references: UNIPROT:Q8XCTO; UNIPARC:UPI0000DD0433; GB:BA000007; PIDN:BAB36612.1;
A,Experimental source: strain O157:H7, substrain RIMD 0509952
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     hypothetical protein yfcI [imported] - Escherichia coli (strain O157:H7, substrain EDL93 C;Species: Bscherichia coli (species: Bscherichia coli (c;Species: Bscherichia coli (c;Species: 16-Feb-2001 #sequence_revision 16-Feb-2001 #text_change 31-Dec-2004 C;Accession: F85871 R;Perna, N.T.; Plunkett III, G.; Burland, V.; Mau, B.; Glasner, J.D.; Rose, D.J.; Mayhew lller, L.; Grotheck, E.j.; Davis, N.W.; Lim, A.; Dimalanta, E.; Potamousis, K.; Apodaca, Nature 409, 529-533, 2001 A;Title: Genome sequence of enterohemorrhagic Escherichia coli O157:H7.
                                                                                                RESULT 19
E91027
hypothetical protein EC83189 (imported) - Escherichia coli (8train 0157:H7, substrain RI
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                                                                                                                                                                                       C;Species: Escherichia coli
C;Date: 18-Jul-2001 #sequence_revision 18-Jul-2001 #text_change 31-Dec-2004
C;Accession: E91027
R;Hayashi, T; Makino, K.; Ohnishi, M.; Kurokawa, K.; Ishii, K.; Yokoyama, K.; Han, C.G.
gasawart, N.; Yasunaga, T.; Kuhara, S.; Shiba, T.; Hattori, M.; Shinagawa, H.
DNA Res: 8, 11-22, 2001
A;Title: Complete genome sequence of enterohemorrhagic Escherichia coli O157:H7 and genc
A;Reference number: A99629; MUID:21156231; PMID:11258796
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A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-296 <STO>
A;Residues: 1-296 <STO>
A;Croserimental source: UNIPARC:UPI0000000433; GB:AE005174; NID:g12516661;
A;Experimental source: strain O157:H7, substrain EDL933
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G65002

Hypotherical protein b2305 - Escherichia coli (strain K-12)

C;Species: Escherichia coli

C;Date: 12-Sep-1997 #sequence_revision 17-Sep-1997 #text_change 31-Dec-2004

C;Accession: G65002

R;Blunkett III, G; Bloch, C.A.; Perna, N.T.; Burland, V.; Riley, M.; (A.); Rose, D.J.; Mau, B.; Shao, Y.

Science 277, 1453-1462, 1997

A;Title: The complete genome sequence of Escherichia coli K-12.
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. 60;
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100.0%; Pred. No. 60;
iive 0; Mismatches
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Best Local Similarity 100.0%; Pred. No. 60;
Matches 5; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ;Genetics:
;Gene: EC83189
;Superfamily: human PML-1 protein
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Matches 5, Conservative
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A;Cross-references: UNIPROT:Q9XW52; UNIPARC:UP10000076E2F; EMBL:AL033536; PIDN:CAA22139.3
A;Experimental source: clone Y53C10A
C;Genetics:
A;Genetics:
A;Gene: 152P:Y53C10A.5
A;Introns: 31/2; 91/1; 124/1; 233/3; 264/3; 290/1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             probable membrane protein STY4875 [imported] - Salmonella enterica subsp. enterica serove S. Speciese: Salmonella enterica subsp. enterica serovar Typhi A;Note: this species has also been called Salmonella typhi C;Date: 09-Nov-2001 #sequence_revision 09-Nov-2001 #text_change 31-Dec-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Riparkhill, J.; Dougan, G.; James, K.D.; Thomson, N.R.; Pickard, D.; Wain, J.; Churcher, th, T.; Connerton, P.; Cronin, A.; Davis, P.; Davies, R.M.; Dowd, L.; White, N.; Farrar, S.; Moule, S.; O'Gaora, P.
Nature 413, 848-552, 2001
A;Authors: Parry, C.; Quail, M.; Rutherford, K.; Simmonds, M.; Skelton, J.; Stevens, K.; A;Title: Complete genome sequence of a multiple drug resistant Salmonella enterica serova A;Reference number: AB0502; MUID:21534947; PMID:11677608
A;Accession: AE1068
A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Cross-references: UNIPARC:UPI000005A9BD; GB:AL513382; PIDN:CAD03364.1; PID:g16505636; (
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A,Authors: Kaine, B.P.; Borodovsky, M.; Klenk, H.P.; Fraser, C.M.; Smith, H.O.; Woese, C. A,Title: Complete genome sequence of the methanogenic archaeon, Methanococcus jannaschii. A,Recession: H64491
A,Recession: H64491
A,Retus: preliminary; nucleic acid sequence not shown; translation not shown A,Rolecule type: DNA
A,Residues: 1-343 < BNA
A,Residues: 1-343 < BNA
A,Residues: UNIPROT: Q58932; UNIPARC: UPIO00013AD2A; GB: U67594; GB: L77117; NID: 9155
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C,Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change 09-Jul-2004
C,Accession: H64491
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A.Map position: REV1515744-1514713
C.Superfamily: Methanococcus jannaschii hypothetical protein MJ1537
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                                                                                                                                                                                                                           Query Match 55.6%; Score 5; DB 2; Best Local Similarity 100.0%; Pred. No. 63; Matches 5; Conservative 0; Mismatches
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100.0%; Pred. No. 64;
tive 0; Mismatches
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Best Local Similarity 100.0
Matches 5; Conservative
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A; Residues: 1-321 < PAR>
         A; Residues: 1-319 <WIL>
                                                                                                                                                                                                                                                                                                                                                                                                                     154 VETWF 158
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Conserved hypothetical protein STY4020 [imported] - Salmonella enterica subsp. enterica
Conserved hypothetical protein STY4020 [imported] - Salmonella enterica subsp. enterica
C; Species: Salmonella enterica subsp. enterica serovar Typhi
A;Note: this species has also been called Salmonella typhi
C;Date: 09-Nov-2001 #sequence_revision 09-Nov-2001 #text_change 31-Dec-2004
C;Accession: A40966
R;Parkhill, J; Dougan, G; James, K.D; Thomson, N.R.; Pickard, D.; Wain, J.; Churcher, th, T.; Connerton, P.; Cronin, A.; Davis, P.; Davies, R.M.; Dowd, L.; White, N.; Farrar, S.; Moule, S.; O'Gaora, P.
Nature 413, 848-852, 2001
A;Authors: Parry, C.; Quail, M.; Rutherford, K.; Simmonds, M.; Skelton, J.; Stevens, K.;
A;Authors: Parry, C.; Quail, M.; Rutherford, K.; Simmonds, M.; Skelton, J.; Stevens, K.;
A;Authors: AB0502; MUID:21534947; PMID:11677608
A;Accession: AH0966
A;Accession: AH0966
A;Accession: AH0966
A;Residues: preliminary
A;Molecule type: DNA
A;Residues: 1-313 - PAR>
A;Cross_references: UNIPARC:UPI00005A6D2; GB:AL513382; PIDN:CAD03228.1; PID:g16504856;
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348036
hypothetical protein - kiwi fruit
C;Species: Actinidia chinensis var. deliciosa (kiwi fruit)
C;Species: Actinidia chinensis var. deliciosa (kiwi fruit)
C;Species: 26-Dec-1994 #sequence_revision 27-Feb-1997 #text_change 17-Mar-1999
C;Accession. S.B.; Gardner, R.C.
R;Ledger, S.E.; Gardner, R.C.
A;Ledger, S.E.; Gardner, R.C.
A;Title: Cloning and characterization of five cDNAs for genes differentially expressed
A;Reference number: S48035; MUID:94355660; PMID:8075403
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A;Note: the nucleotide sequence was submitted to the EMBL Data Library, January 1994
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C.Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 09-Jul-2004
C.Accession: T27118
R.White, S.
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A;Molecule type: DNA
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100.0%; Pred. No. cz.
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Best Local Similarity 100.0%; Pred. No. 63;
Matches 5; Conservative 0; Mismatches
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C;Superfamily: human PML-1 protein
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Best Local Similarity 100.v.
Best Acal Similarity 5; Conservative
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A;Accession: T27118
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A; Residues: 1-317 < LED>
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FLRHP 21
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FLRHP 43
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C; Date: 12-Feb-1999 #sequence_revision 12-Feb-1999 #text_change 09-Jul-2004
R; Alm, RA, i Ling, L.S.L.; Moir, D.T.; King, B.L.; Brown, E.D.; Doig, P.C.; Smith, D.R.;
I ves, C.; Gibson, R.; Merberg, D.T.; Mills, S.D.; Jiang, Q.; Taylor, D.E.; Vovis, G.F.; J
Nature 397, 176-180, 1399
A; Title: Genomic sequence comparison of two unrelated isolates of the human gastric pathe
A; Reference number: A71800; MUID:99120557; PMID:9923682
A; Status: preliminary
A; Status: preliminary
A; Status: DNA
A; Status: DNA
A; Casser-references: UNIPROT:Q9ZLPI; UNIPARC:UPI000000364E; GB:AE001486; GB:AE001439; NID:
A; Experimental source: strain J99
C; Genetics:
A; Status: Prelimily: Helicobacter pylori 2-oxoacid ferredoxin oxidoreductase; 2-oxoacid ferredo
C; Superfamily: Helicobacter pylori coxoacid ferredoxin oxidoreductase; 2-oxoacid ferredoxin propriets and pr
A;Status: translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Molecule type: mRNA
A;Molecule type: mRNA
A;Kosestalues: 1-368 <SAT>
A;Crose-references: UNIPROT: Q43085; UNIPARC: UPI00000A9D1C; EMBL: D86180; PIDN: BAAl3032.1
A;Experimental source: var. Alaska
C;Genetics:
A;Gene: PATI
C;Keywords: glycosyltransferase; pentosyltransferase
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C;Species: Helicobacter pylori
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Matches 5; Conservative 0; Mismatches
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A;Residues: 1-358 <DUZ>
A;Crose-references: UNIPROT: Q22789; UNIPARC: UPI0000081C10; EMBL: U43283; PIDN: AAC69023.1;
A;Experimental source: strain Bristol N2; clone T25G12
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                           Cispecies: Streptomyces rimosus
Cispecies: Streptomyces rimosus
Cispecies: Streptomyces rimosus
Cipate: 03-Mar-1994 #sequence_revision 03-Mar-1994 #text_change 09-Jul-2004
CiAccession: A46567
RiReynes, J.P.; Calmels, T.; Drocourt, D.; Tiraby, G.
A.Gen. Microbiol: 134, 585-598, 1988
A;Title: Cloning, expression in Bscherichia coli and nucleotide sequence of a tetracycli
A;Reference number: A46567; MUID:89036114; PMID:3053973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A,Status: preliminary
A,Molecule type: DNA
A,Residues: 1-347 <REY>
A,Cross-references: UNIPROT:P14551; UNIPARC:UPI0000136B1D; GB:M20370; NID:g153503; PIDN:
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anthranilate phosphoribosyltransferase (EC 2.4.2.18) - garden pea (fragment)
N;Alternate names: phosphoribosylanthranilate transferase
C;Species: Pisum sativum (garden pea)
C;Species: Pisum sativum (garden pea)
C;Accession: T06460
R;Sato, N.; Kazuno, A.; Ohta, N.; Ohshima, K.
submitted to the RMLD Bata Library, June 1996
A;Description: Isolation of a pea cDNA for phosphoribosylanthranilate transferase.
A;Reference number: 215694
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C'Date: 29-Oct-1999 #sequence_revision 29-Oct-1999 #text_change 09-Jul-2004
C'Accession: T34382
R;Du, Z.
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C;Superfamily: Caenorhabditis transposon Tc1 hypothetical 32K protein
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A;Description: The sequence of C. elegans cosmid T25G12.
A;Reference number: Z21515
A;Accession: T34382
A;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  hypothetical protein T25G12.9 - Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               55.6%; Score 5; DB 2;
100.0%; Pred. No. 68;
iive 0; Mismatches
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Best Local Similarity 100.0%; Pred. No. 70;
Matches 5; Conservative 0; Mismatches
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Best Local Similarity 100.
Matches 5; Conservative
                                                                                                          105 FLRHP 109
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                                                            FLRHP
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A;Accession: T06460
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C; Accession: AC3235
R; Wood, D.W.; Setubal, J.C.; Kaul, R.; Monks, D.; Chen, L.; Wood, G.E.; Chen, Y.; Woo, L. erage, G.; Gillet, W.; Grant, C.; Guenthner, D.; Kutyavin, T.; Levy, R.; Li, M.; McClelle Farp, P.; Romero, P.; Zhang, S. science 294, 2317-2323, 2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Authors: Yoo, H.; Tao, Y.; Biddle, P.; Jung, M.; Krespan, W.; Perry, M.; Gordon-Kamm, E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein T17H7.13 [imported] - Arabidopsis thaliana
C;Species: Arabidopsis thaliana (mouse-ear cress)
C;Date: 02-Mar-2001 #sequence_revision 02-Mar-2001 #text_change 09-Jul-2004
C;Accession: B86434
R;Theologis, A.; Ecker, J.R.; Palm, C.J.; Federspiel, N.A.; Kaul, S.; White, O.; Alonso, Chin, C.W.; Chung, M.K.; Conn, L.; Conway, A.B.; Conway, A.R.; Creasy, T.H.; Dewar, K.; ansen, N.F.; Hughes, B.; Huizar, L.
Nature 408, 816-820, 2000
A;Authors: Hunter, J.L.; Jenkins, J.; Johnson-Hopson, C.; Khan, S.; Khaykin, B.; Kim, C.C.
C.A.; Li, J.H.; Li, Y.; Lin, X.; Liu, S.X.; Liu, Z.A.; Luros, J.S.; Maiti, R.; Marziali, Rizzo, M.; Rooney, T.; Schwartz, J.R.; Shinn, P.; Southwick, A.M.; Sun, H.; Tallon, I kar, M.; W. G.; Fraser, C.M.; Venter, J.C.; Davis, R.W.
A;Title: Sequence and analysis of chromosome lof the plant Arabidopsis.
A;Reference number: A86141; MUID:21016719; PMID:11130712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Residues: 1-415 <KUR>
A;Cross-references: UNIPROT:Q8U674; UNIPARC:UP10000D276A; GB:AE008690; PIDN:AAL46297.1;
A;Experimental source: strain C58 (Dupont)
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                                                                                                                                                                                                                                                                                                                                                                               nitrilotriacetate monooxygenase nrtA [imported] - Agrobacterium tumefaciens (strain C58,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ster, E.W.
A,Title: The Genome of the Natural Genetic Engineer Agrobacterium tumefaciens C58.
A,Reference number: AB2577; MUID:21608550; PMID:11743193
                                                                                                                                                                                                                                                                                                                                                                                            C.Species: Agrobacterium tumefaciens
C.Date: 11-Jan-2002 #sequence_revision 11-Jan-2002 #text_change 09-Jul-2004
C.Accession: AC3235
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                                55.6%; Score 5; DB 2
100.0%; Pred. No. 76;
ive 0; Mismatches
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100.0%; Pred. No. 79;
iive 0; Mismatches
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100.0%; Pred. No. 79;
ive 0; Mismatches
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C,Superfamily: nitrilotriacetate monooxygenase
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Best Local Similarity 100.
Matches 5; Conservative
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Best Local Similarity 100.
Matches 5; Conservative
                             Query Match
Best Local Similarity
Matches 5; Conserv
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A;Molecule type: DNA
A;Residues: 1-415 <STO>
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A; Status: preliminary
A; Molecule type: DNA
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                                                                                                                                                                                                                                                                                                                                                  hypothetical protein F1M20.17 [imported] - Arabidopsis thaliana C; Species: Arabidopsis thaliana (mouse-ear cress)
C; Species: Arabidopsis thaliana (mouse-ear cress)
C; Species: Arabidopsis thaliana (mouse-ear cress)
C; Species: O2-Mar-2001 #sequence_revision 02-Mar-2001 #text_change 09-Jul-2004
C; Accession: H9673
R; Theologis, A.; Ecker, J.R.; Palm, C.J.; Federspiel, N.A.; Kaul, S.; White, O.; Alonso, C.W.; Chung, M.K.; Conn, L.; Conway, A.B.; Conway, A.R.; Creasy, T.H.; Dewar, K.; ansen, N.F.; Hughes, B.; Huizar, L.
Nature 408, 816-820, 2000
A; Authors: Hunter, J.L.; Jenkins, J.; Johnson-Hopson, C.; Khan, S.; Khaykin, E.; Kim, C.C.A.; Li, J.H.; Li, Y.; Liu, S.Y.; Liu, Z.A.; Luros, J.S.; Maiti, R.; Marziali, Rizzo, M.; Rooney, T.; Rowley, D.; Sakano, H.
A; Authors: Salzberg, S.L.; Schwartz, J.R.; Shinn, P.; Southwick, A.M.; Sun, H.; Tallon, A; Authors: Salzberg, S.L.; Schwartz, J.R.; Shinn, P.; Southwick, A.M.; Sun, H.; Tallon, A; Reference and analysis of chromosome 1 of the plant Arabidopsis.
A; Accession: H95773
A; Accession: H95773
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A;Residues: 1-378 <STO>
A;Cross-references: UNIPROT:Q9CA65; UNIPARC:UPI00000A3E86; GB:AE005173; NID:g6539251; PI
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C;Species: Rattus norvegicus (Norway rat)
C;Date: 26-Jul-1996 #sequence_revision 26-Jul-1996 #text_change 09-Jul-2004
C;Accession: I58168; I59386
R;Lyford, G.L.; Yamagata, K.; Kaufmann, W.E.; Barnes, C.A.; Sanders, L.K.; Copeland, N.G
Neuron 14, 433-445, 1995
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A;Cross-references: UNIPROT:Q62743; UNIPARC:UPI00000ESC7E; EMBL:U19866; NID:g644828; PID
R;Link, W.; Konietzko, U.; Kauselmann, G.; Krug, M.; Schwanke, B.; Frey, U.; Kuhl, D.
Proc. Natl. Acad Sci. U.S.A. 92, 5734-5738, 1995
A;Title: Somatodendritic expression of an immediate early gene is regulated by synaptic A;Reference number: IS9386; MUID:95296386; PMID:7777577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Residues: 1-208,'V',210-396 <RE2>
A;Cross-references: UNIPARC:UPI00000E79AC; EMBL:Z46925; NID:g854413; PIDN:CAA87033.1; PI
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A,Reference number: IS8168; MUID:95161073; PMID:7857651
A,Accession: IS8168
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C,Superfamily: kinase-related transforming protein; protein kinase
                             Length 375;
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A;Molecule type: mRNA
                          DB 2;
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55.6%; Scor.
100.0%; Pred. No. ...
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A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Nolecule type: mRNA
A;Residues: 1-456 <GIR>
A;Residues: 1-456 <GIR>
A;Residues: 1-456 <GIR>
A;Cross-references: UNIPROT:003849; UNIPARC:UPI0000A796F; EMBL:294180; PIDN:CAB08111.1
A;Experimental source: cultivar Bonner Beste, mutant chloronerva; roots
C;Superfamily: pyruvate dehydrogenase (lipoamide) alpha chain; thiamin pyrophosphate-binc
C;Keywords: mitochondrion; oxidoreductase; phosphoprotein
F;1-341Domain: transit peptide (mitochondrion) #stetus predicted <TNP>
F;35-456/Product: 3-methyl-2-oxobutanoate dehydrogenase (lipoamide) E1-alpha chain #statu
F;35-456/Domain: thiamin pyrophosphate-binding domain homology <TPB>
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55.6%; Score 5; DB 2;
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MLN 64 protein - human

C;Species: Homo sapiens (man)

R;Tomasetto, C.; Regnier, C.H.; Moog-Lutz, C.; Mattei, M.G.; Chenard, M.P.; Lidereau, R.

Genomics 28, 37, 376, 1995

A;Reference number: 137080; MUID:96039245; PMID:7490669

A;Reference number: 137080; MUID:96039245; PMID:7490669

A;Recession: 138027

A;Reference number: Homo sapiens (man)

A;Residues: 1-445 <- RES>

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A;Residues: Homo sapiens (man)

A;Residues: Homo s
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A;Genetics:
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GenCore version 5.1.9 Copyright (c) 1993 - 2006 Biocceleration	- protein search, using sw model	August 31, 2006, 10:29:54; Search time 107.75 (without alignments) 38.190 Million cell	DENGUE_SEROTYPE2 score: 9 : 1 ietwflrhp 9	table: OLIGO Gapop 60.0 , Gapext 60.0	,9 seqs,	1	hits sa	seq length: 0 seq length: 200000000	Post-processing: Listing first 150 summaries	Geneseq_8:*			6: geneseqp2003as:* 7: geneseqp2003bs:*		esults predicted by	of the total	SUMMARIES	Query Score Match Length DB ID	100.0 39 9	100.0 48 9	66.7 146 5	66.7 201 5	66.7 216 4	66.7 234 4	66.7 234 5	66.7 234 5	66.7 234 6	66.7 234 6	66.7 234 6	66.7 234 6	66.7 234 6	6 66.7 234 6 ABU89859 6 66.7 234 6 ABR68108 6 66.7 234 6 ABR66108	0 467 /:00

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                                                                                                                                                                                                                                                                                                                                                         New isolated and purified ApoptoM peptide comprises 9 amino acids, useful as a vaccine for preventing or treating pathological conditions from nonspecific febrile illnesses to severe hemorrhagic manifestations or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The present invention relates to an isolated and purified ApoptoM peptide. The invention is useful as a vaccine for the prevention and treatment of pathological conditions from non-specific febrile illnesses pathological conditions, encephalitic syndromes and these pathological conditions are linked to Flavivirus infection or cancers. The invention is also useful in gene therapy. The present sequence is a M1-40/DEN (dengue)-2 (F36) mutant protein.
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hemorrhage; bleeding; infection; flavivirus infection; neoplasm;
DEN; dengue; EGFP; enhanced green fluorescent protein.
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ABU91386
ABU9934
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADW12582 standard; peptide; 39 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               M1-40/DEN-2 (F36) mutant protein.
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30-JUN-2003; 2003US-00608029

30-DEC-2004

Gene therapy, protein purification; virucide; cytostatic; vaccine; hemorrhage; bleeding; infection; flavivirus infection; neoplasm; cancer; DEN; dengue; mutant; mutein.

ADW12582

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The invention relates to a secretory polynucleotide (designated sptm)

comprising any of 567 polynucleotide sequences (ABZ35837-ABZ36403), a

actually occurring polynucleotide sequence at least 90 % identical to

the polynucleotide sequence, a polynucleotide complementary to them or an

RNA equivalent of them. The polypeptide or polynucleotide are useful for

treating, preventing or diagnosing a disease or condition associated with

the expression of functional SPTM. These are particularly useful for

diagnosing, treating or preventing autoimmune/inflammatory disorders

(e.g. acquired immunodeficiency syndrome, anaemia, asthma or Crohn's

disease), neurological disorders (e.g. epplepsy, Huntington's disease,

dementia, stroke, Alzheimer's disease, Creutzfeldt-Jakob disease,

conticpirenia or amnesia), or cell proliferative disease, anxiety,

schizopirenia or amnesia), or cell proliferative disease, anxiety,

conticpirenia or amnesia), or cell proliferative disease,

leukaemia, lymphoma, melanoma, myeloma, sarcoma or cancers of the brain,

correat, cervix or prostate). The present sequence is one of the SPTM

proteins of the invention (ABP75384-ABP75962). Note: The sequence data

corrections of the circum part of the printed specification, but was

corrections of the correct sone or the printed specification, but was
                                                                                                                                                                                                                                                    New human secretory proteins and polynucleotides, useful for diagnosing, treating or preventing autoimmune/inflammatory disorders (e.g. AIDS), neurological disorders (e.g. Alzheimer's), or cell proliferations or
                                           tzen D, Chinn J;
fap PE, Amshey SR;
Kleefeld Y, Gerstin EH;
Panzer SR, Harris B;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note= "OTHER= All Xaa's in this sequence are unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               immunosuppressive; cytostatic; antipsoriatic; antiinflammatory; antibacterial; antivital; antifungal; antiparasitic; gene therapy; arthritis; Parkinson's; Alzheimer's; autoimmune disease; cancer; psoriasis; inflammatory bowel disease; infection; bacteria; virus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         antiarthritic; antiparkinsonian; neuroprotective; nootropic;
                                                                                                                                                                                                                                                                                                                                                                        Claim 27; SEQ ID NO 1084; 458pp + Sequence Listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 111;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Indels
                                         Jones AL, Tran AB, Dahl CR, Gietzen D, Hilman JL, Yu JY, Tuason O, Yap PE, SC, Dam TC, Liu TF, Nguyen DA, Kleefelt H, David MH, Lewis SA, Chen AJ, Panzer S Marwaha R, Lo A, Lan RY, Urashka ME;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 6; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADK36828 standard; protein; 146 AA.
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/label= OTHER
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(INCY-) INCYTE GENOMICS INC.
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                                 Daffo A, Jones ... Dufour GE, Hillman JL, Daughtery SC, Dam TC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             fungus; parasite; human.
                                                                                                                                    Flores V, Marwaha R,
                                                                                                                                                                                     WPI; 2003-075543/07.
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IETWFL 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                           N-PSDB; ABZ36342
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                                                                                                                                                                                                                                                                                                                                                                                 The present invention relates to an isolated and purified ApoptoM peptide. The invention is useful as a vaccine for the prevention and treatment of pathological conditions from non-specific febrile illnesses to severe hemorrhagic manifestations, encephalitic syndromes and these pathological conditions are linked to Flavivirus infection or cancers. The invention is also useful in gene therapy. The present sequence is a p(95-114) EGFP (enhanced green fluorescent protein) (M1-M40) DEN (dengue) -2 (136F) plasmid DNA encoded protein.
                                                                                                                                                                                                                         New isolated and purified ApoptoM peptide comprises 9 amino acids, useful as a vacaine for preventing or treating pathological conditions from nonspecific febrile illnesses to severe hemorrhagic manifestations or encephalitic syndromes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human; SPTM; autoimmune disorder; inflammatory disorder; AIDS; anaemia; asthma, Crohn's disease; neurological disorder; epilepsy; cancer; Huntington's disease; Alzheimer's disease; Creutzfeldt-Jakob disease; multiple, sclerosis; Parkinson's disease; cell proliferative disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       anti-inflammatory; immunosuppressive; neuroprotective; nootropic; neuroleptic; anticonvulsant; cytostatic; antiparkinsonian; anxiolytic; antipsoriatic; antianaemic; anti-HIV; human immunodeficiency virus;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
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                   30-JUN-2003; 2003US-00608029
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2001US-0280068P.
2001US-0291280P.
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2001US-0299428P.
2001US-0299776P.
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nes 9; Conservative
                                                                                                               Despres P, Catteau A;
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                                                              (INSP ) INST PASTEUR,
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                                                                                                                                                          2005-047647/05.
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                                                                                                                                                                                N-PSDB; ADW12589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 48 AA;
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17-MAY-2001;
19-JUN-2001;
20-JUN-2001;
20-JUN-2001;
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16-MAY-2001;
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                                                                                                                                                                                                                                                                           This invention relates to a novel isolated polynucleotide comprising a nucleotide sequence selected from one of 1680 sequences, a mature protein coding portion of them, an active domain of them and thehat complementary sequences. The invention may be useful for the production of compounds with an antiarthritic, antiparkinsonian, neuroprotective, nootropic, immunosuppressive, cytostatic, antipsoriatic, antinflammatory, antibaction, the disclosed sequences may be useful for gene therapy. The polypeptides or their antibodies are useful for treating many diseases such as archritis, Parkinson's, Alzheimer's, autoimmune diseases, cancer, psoriasis, inflammatory bowel disease and infections caused by bacteria, viruses, fungi or parasites. The present sequence is that of a human polypeptide of the invention.
                                                                                                                                                                                                           Isolated polynucleotide encoding bone marrow derived polypeptides useful for treating, e.g., Parkinson's, Alzheimer's, cancer, arthritis, Crohn's disease, and inflammatory bowel disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; NOV; antidiabetic; anorectic; antibacterial; virucide; immunomodulator; cytostatic; nootropic; neuroprotective; dyalipidaemia; antiparkinsonian; antilipaemic; gene therapy; metabolic disorder; diabetes; obesity; infection; cachaxia; cancer; Parkinson's disease; neurodegenerative disorder; Alzheimer's disease; immune disorder;
amino acids or the site of a stop codon within the DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
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0
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                                                                                                                                                                                                                                                         Claim 20; SEQ ID NO 8910; 504pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABR58403 standard; protein; 198 AA.
                                                                             05-MAR-2001; 2001WO-US004941.
                                                                                                      07-MAR-2000; 2000US-00519705
                                                                                                               19-MAY-2000; 2000US-00574454
                                                                                                                                                              Tang YT, Liu C, Drmanac RT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
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Matches 6; Conservative
             sednence
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                                                                                                                                       (HYSE-) HYSEQ INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 146 AA;
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                                  WO200216439-A2
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                                                       28-FEB-2002
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The present invention relates to novel human NOV proteins and their coding sequences (ACC72075-ACC72181 and ABRS8365-ABRS8465). The NOV proteins are useful in manufacturing a medicament for treating a syndrome associated with a human disease. The NOV proteins and coding sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NOVX polypeptides and nucleic acids useful for diagnosing, preventing or treating NOVX-associated disorders, e.g. diabetes, obesity, cancer or dyslipidemia, and in chromosome mapping, tissue typing or pharmacogenomics.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     may be used to diagnose, treat or prevent metabolic disorders such as diabetes or obesity, infections, cachexia, cancer, neurodegenerative disorders such as Alzheimer's disease or Parkinson's disease, immune disorders, haematopoietic disorders and various dyslipidaemias
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alsobrook JP, Anderson DW, Boldog FL, Burgess CE, Catterton E; Edinger SR, Ellerman K, Gerlach VL, Gorman L, Guo X, Ji W; Edkuda K, Leach MD, Li L, Miller CE, Patturajan M, Rieger DK; Rothenberg ME, Shimkers RA, Smithson G, Spytek KA, Taupier RJ; Vernet CAM, Voss EZ, Zerhusen BD, Zhong M;
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100.0%; Pred. No. 23;
iive 0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 1; Page 165; 487pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human polypeptide SEQ ID NO 2663.
                       2001US-0327342P.
2001US-0328017P.
2001US-0328044P.
2001US-0328048P.
2001US-0329414P.
2001US-0330142P.
2001US-0331058P.
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2001US-0349575P.
2001US-0346357P.
2002US-0371972P.
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2002US-0373261P.
2002US-0373805P.
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2002US-0381101P.
2002US-0381635P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (CURA-) CURAGEN CORP.
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02-0CT-2001; 2
05-0CT-2001; 2
09-0CT-2001; 2
09-0CT-2001; 2
09-0CT-2001; 2
12-0CT-2001; 2
15-0CT-2001; 2
15-0CT-2001; 2
15-0CT-2001; 2
14-0CT-2001; 2
24-0CT-2001; 2
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                                                                                                                                                                                                                                                                                                                                                                                            19-APR-2002;
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                                                                                                                                                                                                                                                                                                                                                                                                                                         16-MAY-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29-MAY-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            17-MAY-2002;
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ID ABBS
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chemokinetic; thrombolytic; drug screening; arthritis; inflammation;
                              leukaemia.
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     NAMES OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE P
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The invention relates to novel genes (ABL89449-ABL90853) and proteins (ABB89940-ABB90444) useful for preventing, treating or ameliorating medical conditions e.g. by protein or gene therapy. The genes are isolated from a range of human tissues disclosed in the specification. The nucleic acids, proteins, antibodies and (ant) agonists are useful in the diagnosis, treatment and prevention of: (a) cancer, e.g. breast and ovarian cancer and other cancers of the adrenal gland, bone, bone marrow, breast, gastrointestinal tract, liver, lung, or urogenital; (b) immune disorders e.g. Addison's disease, allergies, autoimmune hemolytic anaemia, autoimmune thyroiditis, diabetes mellitus, Crohn's disease, cardiovascular disorders such as mycardial ischaemias; (d) wound healing; (e) neurological diseases euch as mycardial ischaemias; (d) wound healing infectious diseases such as viral, bacterial, fungal and parasitic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                    antiallergic; hepatorropic; antidiabetic; antiinflammatory; antiulcer; vulnerary; antioonulaant; antibacterial; antibugal; antibarasitic; cardiant; gene therapy; cancer; immune disorder; cardiovascular disorder; neurological disease; infection; human; secreted protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  infections. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human; nootropic; immunosuppressant; cytostatic; gene therapy; cancer; peripheral nervous system; neuropathy; central nervous system; CNS; Alzheimer's; Parkinson's disease; Huntington's disease; haemostatic; amyotrophic lateral sclerosis; Shy-Drager Syndrome; chemotactic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Novel 1405 isolated polypeptides, useful for diagnosis, treatment and prevention of neural, immune system, muscular, reproductive, gastrointestinal, pulmonary, cardiovascular, renal and proliferative
  Cytostatic; immunosuppressive; nootropic; neuroprotective; antiviral;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    66.7%; Score 6; DB 5;
100.0%; Pred. No. 23;
live 0; Mismatches
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                                                                                                                                                                                                                                                                                         18-MAY-2001; 2001WO-US016450
                                                                                                                                                                                                                                                                                                                                      19-MAY-2000; 2000US-0205515P
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Best Local Similarity 100.
                                                                                                                                                                                                                                                                                                                                                                                      (HUMA-) HUMAN GENOME SCI
                                                                                                                                                                                                                                                                                                                                                                                                                                     Birse CE, Rosen CA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2002-122018/16.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 201 AA;
                                                                                                                                                                                         WO200190304-A2
                                                                                                                                            Homo sapiens.
                                                                                                                                                                                                                                         29-NOV-2001.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       disorders.
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The invention relates to human nucleic acids (AAI57798-AAI61369) and the encoded polypeptides (AAM38642-AAM42213) with nootropic, immunosuppressant and cytostatic acitvity. The polymucleotides are useful in gene therapy. A composition containing a polypeptide or polymucleotide of the invention may be used to treat diseases of the peripheral nervous system, such as peripheral nervous injuries, peripheral nervous is system, such as peripheral nervous system diseases, such as localised neuropathies and central nervous system diseases, such as alzheimer's, Parkinson's disease, Huntington's disease, amyotrophic contains and Shy-Darger Syndrome. Other uses include the utilisation of the activities such as: Immune system suppression, Activin/inhibin activity, chemoteatic/chemokinetic activity, haemostatic and thrombolytic activity, chemoteatic/chemokinetic activity, haemostatic and thrombolytic activity, cancer diagnosis and therapy, drug screening, assays for receptor activity, arthritis and inflammation, leukaemias and C.N.S disorders. Note: The sequence data for this patent did not form part of the printed specification
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Wang D;
Zhao QA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 nucleic acids and polypeptides, useful for treating disorders such
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ren F, Wa
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Yang Y,
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lang Z, Wehrman T, Xu C, Xue AJ,
soodrich R, Drmanac RT;
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100.0%; Pred. No. 25;
ive 0; Mismatches
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                                                                                                                                                                                                                             23-DEC-1999; 99US-00471275.
21-JAN-2000; 2000US-00488725.
25-APR-2000; 2000US-00552317.
20-UIN-2000; 2000US-0055042.
19-UIL-2000; 2000US-0055450.
14-SEP-2000; 2000US-0065191.
19-CT-2000; 2000US-00653191.
                                                                                                                                                                         26-DEC-2000; 2000WO-US034263
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2001-442253/47.
N-PSDB; AAIS9086.
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (HYSE-) HYSEQ INC.
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                                                       WO200153312-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Wang
Homo sapiens
                                                                                                              26-JUL-2001
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Wang J, Y
Zhou P, G
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dog; cat; pig; goat; rabbit; tumour necrosis factor alpha; TNF-alpha; blood; chondrocyte cell; cell proliferation; cell differentiation; colon; adrenal; lung; breast; prostate; rectum; cervix; liver; genetic disorder.
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Wood WI, Zhang
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                                                                                                                                                                               14-MAR-2000; 2000US-0189320P.
15-MAR-2000; 2000US-0189320P.
15-MAR-2000; 2000US-0189320P.
21-MAR-2000; 2000US-0190828P.
21-MAR-2000; 2000US-0191048P.
21-MAR-2000; 2000US-0191048P.
21-MAR-2000; 2000US-0191048P.
29-MAR-2000; 2000US-0193032P.
29-MAR-2000; 2000US-0193032P.
29-MAR-2000; 2000US-0193032P.
11-APR-2000; 2000US-0194647P.
11-APR-2000; 2000US-0195000P.
11-APR-2000; 2000US-0196000P.
11-APR-2000; 2000US-0196000P.
11-APR-2000; 2000US-0196000P.
11-APR-2000; 2000US-0196000P.
11-APR-2000; 2000US-0196000P.
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18-APR-2000; 2000US-0198585P.
25-APR-2000; 2000US-0199397P.
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02-JUN-2000; 2000WO-US015264.
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03-MAR-2000; 2000US-0187202P.
06-MAR-2000; 2000US-0186968P.
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28-JUL-2000; 2000WO-US020710
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01-DEC-2000; 2000WO-US032678
20-DEC-2000; 2000WO-US034956
                                                                                                                28-FEB-2001; 2001WO-US006520
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Smith V,
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                                                                    WO200168848-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                    03-MAY-2000;
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                                              Homo sapiens
                                                                                           20-SEP-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Baker
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Novel nucleic acids encoding PRO polypeptides, used to diagnose the presence of tumors, such as prostate and breast tumors, in mammals and to screen for modulators of the compounds.

Gurney AL;

Claim 11; Fig 66; 774pp; English

Sequences AAU29024-AAU29328 represent PRO polypeptides of the invention. The PRO polypeptides and their associated nucleic acids can be used to detect the presence of a tumour in a mammal by comparing the level of expression of a PRO polypeptide in a test sample of calls from the animal and a control sample of normal cells, whereby a higher level of expression in the test sample indicates the presence of a tumour in the mammal. Mammals include dogs, cats, cattle, horses, sheep, pigs, goats

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I, Zhao QA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The invention relates to human nucleic acids (AAI57798-AAI61369) and the encoded polypeptides (AAM38642-AAM42213) with nootropic, immunosuppressant and cytostatic activity. The polynucleotides are useful
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Novel nucleic acids and polypeptides, useful for treating disorders such
and rabbits but are preferably human. The polypeptides can be used to stimulate tumour necrosis factor (TNF) alpha release from human blood, when contacted with it. A specific polypeptide can be used to stimulate the proliferation or differentiation of chondrocyte cells. The PRO proteins can be used to determine the presence of tumours and also susceptibility to tumour development, particularly adrenal, lung, colon, breast, prostate, rectal, cervical, or liver tumours, in mammalian subjects. The oligonucleotide probes specific for the PRO nucleic acids can be used for genetic analysis of individuals with genetic disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; nootropic; immunosuppressant; cytostatic; gene therapy; cancer; peripheral nervous system; neuropathy; central nervous system; CNS; Alzheimer's; Parkinson's disease; Huntington's disease; haemostatic; amyotrophic lateral sclerosls; Shy-Drager Syndrome; chemotactic; chrombolytic; drug screening; arthritis; inflammation;
                                                                                                                                                                                                          Gaps
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                                                                                                                                                                               Length 234;
                                                                                                                                                                                                          0; Indels
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Yang Y,
                                                                                                                                                                              66.7%; Score 6; DB 4;
100.0%; Pred. No. 26;
iive 0; Mismatches
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ΑJ,
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Wang Z, Wehrman T, Xu C,
Goodrich R, Drmanac RT;
                                                                                                                                                                                                                                                                                                                                         AAM39929 standard; protein; 234 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        as central nervous system injuries
                                                                                                                                                                                                                                                                                                                                                                                                                             Human polypeptide SEQ ID NO 3074.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            990S-00471275.

2000US-00488725.

2000US-0052317.

2000US-00598042.

2000US-0062012.

2000US-0063450.

2000US-006315.
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                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                            6; Conservative
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                                                                                                                                                                            Query Match
Best Local Similarity
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N-PSDB; AAI59085.
                                                                                                                                                    Sequence 234 AA;
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14-SEP-2000; 2
19-OCT-2000; 2
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25-APR-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    leukaemia
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Zhou P,
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166 IETWFL 171
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18-AUG-1998;
26-AUG-1998;
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04-JUN-1998
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24-JUN-19
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02-JUL-1
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in gene therapy. A composition containing a polypeptide or polynucleotide of the invention may be used to treat diseases of the peripheral nervous system, such as peripheral nervous injuries, peripheral nervous to a such as peripheral nervous injuries, peripheral nervous focalised neuropathies and central nervous system diseases, such as Alzheimer's, Parkinson's disease, Huntington's disease, amyotrophic atteral sclerosis, and Shy-Drager Syndrome. Other uses include the utilisation of the activities such as: Immune system suppression, Activin/inhibin activity, chemotactic/chemokinetic activity, haemostatic and thrombolytic activity, cancer disgnosis and therapy, drug screening, assays for receptor activity, arthritis and inflammation, leukaemias and C.N.S disorders. Note: The sequence data for this patent did not form part of the printed specification
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eighty four nucleic acids encoding PRO polypeptides, useful in molecular biology, including use as hybridization probes, and in chromosome and
                                                                                                                                                                                                                                                                            Gaps
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Wood WI;
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                                                                                                                                                                                                                                             Score 6; 1
Pred. No.
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Watanabe CK,
                                                                                                                                                                                                                                                                                                                                                                                                                       AAB87532 standard; protein; 234 AA.
                                                                                                                                                                                                                               66.7%; Scc.
100.0%; Pre
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99WO-USO21090.
99US-0169495P.
99US-0170262P.
2000US-0175481P.
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18-FEB-2000; 2000WO-US004342.
22-FEB-2000; 2000WO-US004414.
01-MAR-2000; 2000WO-US005601.
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2000US-0191007P.
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2000US-0199397P
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                                                                                                                                                                                                                          Query Match
Query Match
Best Local Similarity 100.vv
Best Local Similarity
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Grimaldi CJ, Gurney AL,
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N-PSDB; AAF92064.
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                                                                                                                                                                                                             Sequence 234 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human PRO1864.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
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11-JAN-2000;
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07-DEC-1999;
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                transmembrane). The PRO protein, and PRO agonists, PRO antagonists or anti-PRO antibodies are useful for preparation of a medicament useful in the treatment of a condition which is responsive to the PRO protein, agonists, antagonists or anti-PRO antibodies. The PRO protein may also be employed as molecular weight markers for protein electrophoresis. The PRO coding sequence has applications in molecular biology, including use as hybridisation probes, and in chromosome and gene mapping
                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human, secreted protein, transmembrane protein, antirheumatic,
antiarthritic, osteopathic, sports-related joint problem,
articular cartilage defect, osteoarthritis, rheumatoid arthritis.
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The present sequence is a human PRO polypeptide (secreted and
                                                                                                                                                                                                                                                     Length 234;
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98US-0082797P
98US-0082797P
98US-0087759P
98US-0088021P
98US-0088021P
98US-00880740P
98US-0088734P
98US-0088740P
98US-0088740P
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98US-0089105P.
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98US-0090444P.
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98US-0096949P.
98US-0096959P.
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98US-0091628P.
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Query Match
Best Local Similarity 100.v.
Best Local Similarity
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98US - 0097979P .
98US - 0098741P .
98US - 0099741P .
98US - 0099763P .
98US - 0099812P .
98US - 0099812P .
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98US-0101743P.
98US-0101916P.
98US-0102570P.
98US-0103449P.
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99WO-US012252.
99WO-US020111.
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98US-0101279P.
98US-0101475P.
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99WO-US021194.
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20-DEC-2000; 2000WO-US034956.
28-FEB-2001; 2001WO-US006520.
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98US-0100684P.
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2000WO-US023328.
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30-MAY-2001; 2001WO-US017443.
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30-MAR-2000;
22-MAY-2000;
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                                             10-SEP-1998;
10-SEP-1998;
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23-SEP-1998;
             01-SEP-1998;
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08-MAR-1999;
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02-JUN-1999;
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22-DEC-1999;
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Godowski PJ; Goddard A, Wood WI; Gerritsen ME, Watanabe CK, Eaton DL, Filvaroff B, Grimaldi JC, Gurney AL,

WPI; 2002-731348/79. N-PSDB; ABS74384.

New isolated secreted and transmembrane PRO polypeptide useful for modulating biological activity of a cell, or for treating sports-related joint problems, osteoarthritis or rheumatoid arthritis.

20; Fig 14; 399pp; English. Claim The invention relates to an isolated secreted and transmembrane PRO Polypeptide having 80 % sequence identity to a sequence appearing as ABG95881-ABG95914 or their associated signal peptide, or a sequence of an extracellular domain of the proteins with their associated signal peptide or lacking its associated signal peptide. Also included are the nucleic acids encoding the proteins, vectors, host cells, tusion proteins and antibodies which specifically bind to the proteins. The proteins are useful for detecting a polypeptide designated as A, B, C or D in a sample suspected of contraining an A, B, C or D polypeptide, by contacting the sample with a polypeptide designated as E, F, G, H or I (or vice versa) and determining the formation of a A/E, B/F, B/G, C/H or D/I polypeptide

conjugate in the sample, where the formation of the conjugate is indicative of the presence of an A, B, C or D polypeptide in the sample, where A is a PRO10272 polypeptide, B is a PRO5010 polypeptide, C is a C PRO10295 polypeptide, D is a PRO10296 polypeptide, E is a PRO5060 polypeptide, E is a PRO5060 polypeptide, E is a PRO5060 polypeptide, H is a C PRO2023 polypeptide b is a PRO1090 polypeptide. The sample comprises a cell suspected of expressing the A, B, C or D polypeptide. The E, F, G, C H or I polypeptide is labeled with a detectable label or is attached to a solid support. The proteins are useful for linking a bioactive molecule cor a cell expressing a polypeptide designated as A, B, C or D or E, F, G, H or I. The bioactive molecule is a toxin, a radiolabel or an antibody. The bioactive molecule sa toxin, a radiolabel or an antibody. CC or I, or antibodies against them are useful for modulating a biological activity of a cell expressing a polypeptide designated as A, B, C or D or E, F, G, H, or I. The cell is killed. The proteins are useful for useful in the treatment of a condition which is responsive to the proteins, as molecular weight markers for protein selectrophoresis problems, articular cartilage defects, osteoarthritis or rheumatoid arthritis. Nucleic acids encoding the protein selecting to cheunistication, and in Grant Propagation of the proteins, to charagenic or knockout animals which are useful in the development and screening of therapeutic useful as a condition with a description of the proteins are useful in the cell and gene mapping, in the generation of the proteins are useful in the protein from recombinant cell culture natural sources. The present convention in a diagnostic assay and for affinity purification of invention ö Gaps ö 66.7%; Score 6; DB 5; Length 234; 100.0%; Pred. No. 26; ive 0; Mismatches 0; Indels Query Match 66.7 Best Local Similarity 100. Matches 6, Conservative Sequence 234 AA; invention

166 IETWFL 171 1 IETWFL 6 ò ద

ABB84847 standard; protein; 234 AA. 16-MAY-2002 (first entry) ABB84847; ABB84847

RESULT 12

Human PRO1864 protein sequence SEQ ID NO:62.

Human; angiogenesis, cardiant, cytostatic; antiangiogenic; hypotensive; vulnerary; antiarteriosclerotic; PRO agonist; PRO antagonist; trauma; gene therapy; cardiovascular disorder; endothelial disorder; cancer; angiogenic disorder; cardiac hypertrophy; atherosclerosis; hypertension; age-related macular degeneration; arterial restenosis; angina; themuatoid arthritis; mycardial infarction; thrombophlebitis; lymphangitis; tumour angiogenesis; breast carcinoma; liver carcinoma; wound healing; chromosome mapping; gene mapping.

Homo sapiens.

WO200200690-A2

03-JAN-2002.

20-JUN-2001; 2001WO-US019692 THE SECTION OF SECTION

; 2000US-0213637P. ; 2000US-0219556P. ; 2000US-0220624P. ; 2000US-0220664P. 23-JUN-2000; 20-JUL-2000; 25-JUL-2000; 25-JUL-2000;

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Human; angiogenesis; PRO protein; cardiovascularisation; wound; cancer;
therrosclerosis; cardiac hypertrophy; gene therapy; endothelial disorder;
cardiant; cytostatic; antiangiogenic; hypotensive; vulnerary;
antiarteriosclerotic.
                                                                                                                                         Human angiogenesis related protein PRO1864 SEQ ID NO: 62.
                                 ABB95453 standard; protein; 234 AA.
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2001US-00767609
2001WO-US006520.
2001WO-US00666.
2001US-00802706.
2001US-00802706.
2001US-0081644.
2001US-00828166.
2001US-00854208.
2001US-00854280.
2001US-00854280.
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2000WO-US032678.
2000US-00747259.
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24-AUG-2000; 2000WO-US023328.
07-SEP-2000; 2000US-0230978P.
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18-SEP-2000; 2000US-00665350.
24-OCT-2000; 2000US-02922P.
08-NOV-2000; 2000US-0079238.
08-NOV-2000; 2000WO-US030952.
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2001WO-US017443
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20-JUN-2001; 2001WO-US019692
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                                                                                                  19-JUL-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GODDARD A.
GODOWSKI P J.
GURNEY A L.
HILLAN K J.
MARSTERS S A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GERBER H.
GERRITSEN M E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENENTECH INC.
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STEPHAN J. F.
WATANABE C K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BAKER K P.
FERRARA N.
                                                                                                                                                                                                                                                                                                          WO200208284-A2.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                28-FEB-2001; 2
28-FEB-2001; 2
01-MAR-2001; 2
09-MAR-2001; 2
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05-APR-2001; 2
10-MAY-2001; 2
                                                                                                                                                                                                                                                                      Homo sapiens.
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22-JAN-2001;
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                                                                     ABB95453;
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(GURŅ/)
(HILL/)
(MARS/)
(PANJ/)
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RESULT 13
                ABB95453
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABL88072 to ABL88258 encode the PRO proteins given in ABB84817 to ABB85003. The PRO proteins and polymucleotides have cardiant, cytostatic, antiangiogenic, hypotensive, vulnerary and antiarteriosclerotic activities, and can be used in gene therapy. The PRO polymucleotides, proteins, agonists and antagonists are useful for treating or diagnosing cardiac hypertrophy, trauma, cangiogenic disorder in a mammal, e.g. cardiac hypertrophy, trauma, cancer, age-related macular degeneration, atherosclerosis, hypertension, arterial restenosis, rheumatoid arthritis, angina, mycoardial infarctions, thrombophlebitis, lymphangitis, tummour angiogenesis (such as breast carcinoma and liver carcinoma) and wound healing. The PRO polymucleotides have applications in molecular biology, including use as hybridisation probes, and in chromosome and gene mapping. ABL88259 to ABL8826, represent primers and probes used in the exemplification of the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Baker KP, Ferrara N, Gerber H, Gerritsen ME, Goddard A;
Godowski PJ, Gurney AL, Hillan KJ, Marsters SA, Pan J, Paoni NF;
Stephan JF, Watanabe CK, Williams PM, Wood WI, Ye W;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
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                                                                                                                                                                                                                         20-DEC-2000; 200000-0074229: 20-DEC-2000; 2000WO-US034956. 22-JAN-2001; 2001US-00767699. 28-FEB-2001; 2001WS-00796498. 28-FEB-2001; 2001WS-00796498. 29-FEB-2001; 2001WS-0080665. 09-MAR-2001; 2001US-00806665. 09-MAR-2001; 2001US-00806899. 25-MAY-2001; 2001US-00866034. 25-MAY-2001; 2001US-00866034. 25-MAY-2001; 2001US-00866034. 25-MAY-2001; 2001US-00866034. 25-MAY-2001; 2001US-00866034. 30-MAY-2001; 2001US-00866034. 25-MAY-2001; 2001US-00866034. 30-MAY-2001; 2001US-008070574.
                        17-AUG-2000; 2000US-0064367.
23-AUG-2000; 2000WG-US02328.
24-AUG-2000; 2000WG-US023328.
07-SEP-2000; 2000US-0230978P.
18-SEP-2000; 2000US-00664610.
18-SEP-2000; 2000US-00664510.
24-QCT-2000; 2000US-0242922P.
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2000WO-US030952.
2000WO-US030873.
2000WO-US032678.
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166 IETWFL 171
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08-NOV-2000; 2
10-NOV-2000; 2
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Best Loc Matches

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97105-00694335P

97105-0069432P

97105-0069432P

97105-0069422P

98105-0077643P

98105-0077643P

98105-0079786P

98105-0079786P

98105-00803327P

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98105-0088814P

4-NOV-1997;
24-NOV-1997;
11-DEC-1997;
17-DEC-1997;
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   ö
                                                                                                                                                                                                                                                                 The present invention provides the protein and coding sequences of human PRO proteins. These are useful for treating or diagnosing a cardiovascular, endothelial or angiogenic disorder, including cardiac hypertrophy, trauma, cancer, age-related macular degeneration, atherosclerosis, hypertension, arterial restenosis, rheumatoid arthritis, angina, mycoardial infarctions, thrombophiebitis, lymphangitis, tumour angiogenesis (such as breast carcinoma and liver carcinoma) and wound healing. The present sequence is a PRO protein of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human, PRO, cytostatic, tumour, cancer, breast, lung, stomach, liver,
dog, cat, cow, horse, sheep, pig, goat, rabbit, ADEPT,
antibody-dependent enzyme mediated prodrug therapy.
                                                . Ferrara N, Gerber H, Gerritsen ME, Goddard A;
PJ, Gurney AL, Hillan KJ, Marsters SA, Pan J, Paoni NF;
JF, Watanabe CK, Williams PM, Wood WI, Ye W;
                                                                                                                                                                   One hundred and eighty seven nucleic acids encoding PRO polypeptides, useful in diagnosis and treatment of cardiovascular (e.g. myocardial infarction), endothelial or angiogenic disorders in a mammal.
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100.0%; Pred. No. 26;
ive 0; Mismatches 0; Indels
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97US-0062350P.
97US-0063120P.
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97US-0063134P.
97US-0063174P.
97US-0063112P.
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   (WILL/) WILLIAMS P M. (WOOD/) WOOD W I.
                                                                                                                    WPI; 2002-171999/22.
N-PSDB; ABL95591.
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                                                                                     Stephan JF,
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                                                    Baker KP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABU58432;
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                                                                       Godowski
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   PHILAM NAME OF COLORS SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING SERVING 
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23-SEP-1998;
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Gaps
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97US-0063511P.
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97US-0064103P.
97US-00664103P.
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Matches 6; Conserv
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tumour necrosis factor alpha; chondrocyte cell; tumour; gene therapy;
tissue typing.
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                                                                                                                     0; Indels
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                                                                                                      DB 6;
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Pred. No.
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100.0%; Pred
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                                                                                 Gaps
                                                                                ;
                                                            Length 234;
                                                                                 0; Indels
                                                                                                                                                                                                                                 Human secreted polypeptide PRO1864, SEQ ID NO:66.
                                                             DB 6;
                                                         66.7%; Score 6; DB 6
100.0%; Pred. No. 26;
cive 0; Mismatches
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17-DEC-1997;
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PR 25-JUN-1998; PR 26-JUN-1998; PR 26-JUN-1998; PR 26-JUN-1998; PR 26-JUN-1998; PR 26-JUN-1998; PR 01-JUL-1998; PR 02-JUL-1998; PR 02-JUL-1998; PR 02-JUL-1998; PR 02-JUL-1998; PR 10-AUG-1998; PR 11-AUG-1998; PR 11-AUG-1998; PR 11-AUG-1998; PR 11-AUG-1998; PR 11-AUG-1998; PR 12-AUG-1998; PR 13-AUG-1998; PR 13-AUG-1998; PR 14-AUG-1998; PR 16-AUG-1998; PR 16-AUG-1998; PR 16-AUG-1998; PR 17-AUG-1998; PR 17-AUG-1998; PR 18-AUG-1998; PR 23-AUG-1998; PR 23-AUG-1998; PR 24-AUG-1998; ž.		
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09-JUN-1998;
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                                                                                                                                                                           Human; PRO; secreted protein; transmembrane protein; extracellular domain; tumour necrosis factor-alpha; TNP-alpha; chondrocyce; proliferation; differentiation; cartilage disorder; bone disorder; arthritis; sports injury; cancer; tumour; diagnosis; adrenal tumour; lung; colon; breast; prostate; kidney; rectum; civer; drug screening; transgenic animal; genetic analysis; antiarthritic; vulnerary; gene therapy.
             Gaps
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              Indels
              0
                                                                                                                                                          Human secreted polypeptide PRO1864, SEQ ID NO:66.
             Mismatches
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8
     Pred.
                                                                                                 ABR65559 standard; protein; 234 AA
. .08;
                                                                                                                                                                                                                                                                                                                                9705-0059263P.
9705-0059266P.
9705-0063486P.
9705-0063121P.
9705-0063540P.
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98US-0081838P.
98US-0082568P.
98US-0082569P.
                                                                                                                                                                                                                                                                                                                2002US-00188773
                                                                                                                                       05-AUG-2003 (first entry)
    Best Local Similarity 100.
Matches 6; Conservative
                                          166 IETWFL 171
                                1 IETWFL 6
                                                                                                                                                                                                                                                                          US2003036159-A1
                                                                                                                                                                                                                                                                                                                                 18-SEP-1997
18-SEP-1997
24-OCT-1997
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22-APR-1998;
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                                                                                                                    ABR65559;
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                                                                               RESULT 18
                                                                                         ABR65559
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Human, secreted and transmembrane protein, PRO, TNP-alpha,
tumour necrosis factor alpha, chondrocyte cell, tumour, gene therapy,
tissue typing.
                                                                                                  Human secreted/transmembrane protein (PRO) #33.
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                                                                                                                                                                                                                                               970S-0059264P.
970S-0059266P.
970S-00632120P.
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                                                                            09-AUG-2003 (first entry)
                                                                                                                                                                                  US2003040070-A1
                                                                                                                                                              Homo sapiens.
                                                                                                                                                                                                       27-FEB-2003
                                                       ABU99499;
              RESULT 19
ABU99499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 234;
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98US-0102207P
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01-OCT-1998;
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98US-0084366P. 98US-0084414P. 98US-0084639P. 98US-0084640P.

Gaps

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1 IETWFL 6 |||||| 166 IETWFL 171

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PR 15-MV-1998 9003-005550P

PR 22-MV-1998 9003-00552P

PR 22-MV-1998 9003-005646P

PR 22-MV-1998 9003-005646P

PR 02-JW-1998 9003-005646P

PR 04-JW-1998 9003-005646P

PR 04-JW-1998 9003-005646P

PR 04-JW-1998 9003-005672P

PR 04-JW-1998 9003-00562P

PR 04-JW-1998 9003-00562P

PR 04-JW-1998 9003-00562P

PR 04-JW-1998 9003-00562P

PR 04-JW-1998 9003-00562P

PR 05-JW-1998 9003-00562P

PR 05-JW-1998 9003-00562P

PR 10-JW-1998 9003-00562P

PR 10-JW-1998 9003-006865P

PR 11-JW-1998 9003-006865P

PR 12-JW-1998 9003-006865P

PR 12-JW-1998 9003-006865P

PR 22-JW-1998 9003-00698F

PR 22-JW-1998 9003-00698F

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llarity 100.0%; Pred. No. 26;
Conservative 0; Mismatches
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98US-0096897P

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Best Local Similarity
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ID ABU89859;
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AC ABU89859;
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Human; PRO; secreted protein; transmembrane protein; extracellular domain; tumour necrosis factor-alpha; TNF-alpha; chondrocyte; proliferation; differentiation; cartilage disorder; bone disorder; arthritis; sports injury; cancer; tumour; diagnosis; adremal tumour; lung; colon; breast; prostate; kidney; rectum; cervix; liver; drug screening; transgenic animal; genetic analysis; antiarthritic; vulnerary; gene therapy.
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                                                                                                                      DB 6;
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                                                                                                                      Score 6;
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                                         DB 6;
                                       66.7%; Score 6; DB 6
llarity 100.0%; Pred. No. 26;
Conservative 0; Mismatches
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66.7%; Score 6; DB 6; 100.0%; Pred. No. 26; iive 0; Mismatches Query Match Best Local Similarity 100. Matches 6; Conservative

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Gaps .; 0

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ABU98770 standard; protein; 234 AA.
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22-MAR-2001; 2001US-00816744.
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10-MAY-2001; 2001US-00854208.
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29-JUN-2001; 2001WO-US01766.
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15-JAN-2002; 2002US-00052586
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tumour necrosis factor alpha; TNF-alpha; chondrocyte cell; tumour;
                                                   ABU85610 standard; protein; 234 AA.
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99WG-O0202054.
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                                                                    ABU85610;
                                     RESULT 29
                                             ABU85610
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gene therapy;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human; secreted and transmembrane protein; PRO; cytostatic; gene therapy; chondrocyte stimulator; tumour; adrenal tumour; lung tumour; colon tumour; breast tumour; prostate tumour; rectal tumour; tumour; tumour; TNR-alpha release; tumour; actor alpha release; chondrocyte cell differentiation; chondrocyte cell differentiation; bharmaceutical; diagnostic; biosensor; bioreactor.
                                                                                                                                                                                                                                                              Three hundred and five nucleic acids encoding PRO polypeptides, useful for the manufacture of a medicament for diagnosing or treating tumor.
Godowski PJ, Gurney AL;
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        Baker KP, Chen J, Desnoyers L, Goddard A, Gc
Pan J, Smith V, Watanabe CK, Wood WI, Zhang
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98US-008832F

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Pred. No. 26;
0; Mismatches
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Best Local Similarity 100.0%; Pr
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Pred. No. 26;
Mismatches
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Pred. No.
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6; Conservative 0;
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17-OCT-1997;
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16-JUN-1998;
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26;
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Pred. No.
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100.0%; Pre
98US-0101068P.
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6; Conserve
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13-SEP-1998;
23-SEP-1998;
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24-SEP-1998;
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17-OCT-1997;
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PR 18-JUN-1998; 99US-0089522P.
PR 22-JUN-1998; 99US-0089522P.
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PR 11-SEP-1998; 99US-00999774P.
PR 11
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Human, immunogen, secreted protein, transmembrane protein, PRO; tumour, proliferation, differentiation, chondrocyte cells, tumour necrosis factor-alpha, TNF-alpha, blood, gene therapy.
                                                                                                                                                                     Gaps
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                                                                                                                                                      DB 6;
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6; Conservative 0;
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98WO-US019330.
98WO-US021141.
98US-00187368.
98US-002054.
99US-00254311.
99WO-US002028.
99WO-US011832.
99WO-US011832.
99WO-US01133.
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166 IETWFL 171
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23-SEP-1998,
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28-FEB-2001; 2001WO-US006520.
22-MAR-2001; 2001US-00816744.
10-MAY-2001; 2001US-00854208.
10-MAY-2001; 2001US-00854280.
25-MAY-2001; 2001US-00866028.
01-JUN-2001; 2001WO-US017800.
05-JUN-2001; 2001US-00874503.
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2000US-00665350.
2000US-00709238.
2000WO-US030952.
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2000US-00747259.
2000WO-US034956.
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09-JUL-2001; 2001WO-US021735.
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04-SEP-2001; 2001US-00946374
15-JAN-2002; 2002US-00052586
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05-JAN-2000; 2
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08-NOV-2000; 2
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(GETH) GENENTECH INC.

Godowski PJ, Gurney AL; Goddard A, Godor Wood WI, Zhang Z; Chen J, Desnoyers L, Watanabe CK, Smith V, Baker KP, Pan J,

WPI; 2003-332034/31. N-PSDB; ACA73417

Three hundred and five nucleic acids encoding PRO polypeptides, useful in gene therapy, chromosome identification, tissue typing, and for detecting the presence of tumor in a mammal.

Claim 11; Fig 66; 707pp; English

The invention relates to three hundred and five nucleic acids encoding
PRO polypeptides (secreted and transmembrane), sequences 80% identical to
them, or encoding a PRO polypeptide lacking its associated signal peptide
or an extracellular domain of the PRO polypeptide, with or lacking its
associated signal peptide. Also included are the encoded PRO proteins,
PRO expression vectors, host cells transformed with the vector (used to
produce PRO proteins), a chimaeric molecule comprising the PRO
polypeptide fused to a heterologous amino acid sequence, an anti-PRO
antibody, a method for stimulating the release of tumor necrosis factor
antibody, a method for stimulating the proliferation or differentiation
CRO 47NP-a1DADA from buoma Disod (by contecting the blood with PRO1079,
PRO827, PRO791, PRO1131, PRO1131, PRO1183, PRO1343, PRO1567 or
PRO4333), a method for stimulating the proliferation or differentiation
CRO 6 chondrocyte cells by contacting the cells with a PRO6029 polypeptide,
a method for detecting the presence of tumour in a mammal and an
coligonucleotide probe derived from any of the nucleotide sequences cited
above. The PRO polypeptide or anti-PRO antibody is useful for preparing a

99WO-US031274

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medicament for treating a condition that is responsive to the PRO polypeptide or anti-PRO antibody. The PRO nucleotide sequences are useful as hybridisation probes in chromosome and gene mapping, or in generating antisense RNA and DNA. PRO nucleic acids are also useful in preparing PRO polypeptides, in assays to identify other proteins or molecules involved in a binding reaction, to generate transgenic animals or knockout animals, which in turn are useful in the development and screening of therapeutically useful reagents, for chromosome identification, and therapeutically useful reagents, for chromosome identification, and therapeutically useful the presence of a tumour in a mammal, stimulating proliferation or differentiation of chondrocyte cells, stimulating the release of tumour necrosis factor-alpha from human blood, in gene release of tumour necrosis factor-alpha from human blood, in gene cherapy, or as molecular weight markers for protein electrophoresis purposes. The anti-PRO antibodies may be used in diagnostic assays for PRO, or for the affinity purification of PRO from recombinant cell
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tumour necrosis factor alpha, chondrocyte cell, tumour, gene therapy,
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100.0%; Pred. No. 26;
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                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 35
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transmembrane (RRO) polypeptides. Also disclosed is an antibody that specifically binds to the PRO polypeptide, a method for stimulating the specifically binds to the PRO polypeptide, a method for stimulating the release of tumnour necrosis factor alpha (TNF-alpha) from human blood by contacting the blood a PRO polypeptide, a method for stimulating the proliferation or differentiation of chondrocyte cells by contacting the presence of a tumnour in a mammal and an oligonucleotide probe derived from any of the PRO nucleotide sequences. The nucleotide sequences are useful as probes, in chromosome and gene mapping, in generating antisense RNA and DNA, in preparing PRO polypeptides by recombinant techniques and in gene therapy (e.g. for replacement of defective gene). The PRO polypeptides are useful as molecular weight markers for protein electrophoresis purposes, for chromosome identification, as chromosome markers, se therapeutic agents, for stimulating the release of TNF-alpha from human blood, for stimulating the proliferation or differentiation of chondrocytes and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New secreted and transmembrane PRO polypeptides and nucleic acids, useful in gene therapy, in chromosome and gene mapping, as chromosome markers, in tissue typing, and in chromosome identification.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   P, Chen J, Desnoyers L, Goddard A, Godo
Smith V, Watanabe CK, Wood WI, Zhang Z;
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2001US-00854208.
2001US-00854280.
2001US-00866028.
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2000US-00709238.
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2000US-00747259.
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2001US-00874503.
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2001WO-US021066
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06-AUG-2001; 2001US-00924419.
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13-AUG-2001; 2001US-00929404
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05-JAN-2000;
18-FEB-2000;
18-FEB-2000;
22-FEB-2000;
24-FEB-2000;
01-MAR-2000;
02-MAR-2000;
15-MAR-2000;
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18-SEP-2000;
08-NOV-2000;
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22-MAY-2000;
30-MAY-2000;
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10-MAY-2001;
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detecting the presence of a tumour. The PRO polypeptides and nucleic acids may also be used diagnostically for tissue typing. The sequences presented in ABU67406-ABU67710 are the PRO polypeptides of the invention
                                                                                                                                                                                                                                  Human; tumour; adrenal; lung; colon; breast; prostate; rectal; cervical; liver; PRO; gene therapy.
                                                                          Gaps
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                                                       Length 234;
                                                                          0; Indels
                                                    DB 6
26;
                                                       66.7%; Score 6; DB 6
100.0%; Pred. No. 26;
ive 0; Mismatches
                                                                                                                                                            ABU80466 standard; protein; 234 AA.
                                                                                                                                                                                                                                                                                                                                                                          98US-00187368
98WS-00187368
98WS-00205108
99WS-0020518
99WS-00311832
99WS-00311832
99WS-00311832
99WS-0031139
99US-00380138
99US-00380139
99WS-00380139
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98US-00168978.
98WO-US021141.
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                                                         Query Match 66.7
Best Local Similarity 100.
Matches 6; Conservative
                                                                                                                                                                                                                   Human PRO protein #33.
                                                                                                             166 IETWFL 171
                                                                                            1 IETWFL 6
                                      Sequence 234 AA;
                                                                                                                                                                                                                                                                                 US2003036137-A1.
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22-FEB-2000;
24-FEB-2000;
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02-DEC-1999;
30-DEC-1999;
05-JAN-2000;
18-FEB-2000;
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02-MAR-2000;
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15-SEP-1999;
18-OCT-1999;
12-NOV-1999;
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25-AUG-1999
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                                                                                                                                          RESULT 36
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28-JUL-2000; 2000WO-US020710

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The invention describes an antibody that specifically binds to a PRO polypeptide having a fully defined amino acid sequence given in the specification. The antibody is useful in identifying PRO polypeptides bescul for various industrial applications, including pharmaceuticals, diagnostics, biosensors and bioreactors. The antibody is also used for affinity purification of PRO polypeptides from recombinant cell culture or natural sources. The antibody, PRO polypeptide, or its agonists or antagonists, may be used for preparing a medicament for diagnosing or treating a condition responsive to the antibody, PRO polypeptide, or its agonists or antagonists. This is the amino acid sequence of a novel human secreted and transmembrane PRO polypeptide
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New antibody useful for identifying PRO polypeptides, for affinity purification of PRO polypeptides, and for preparing a medicament for diagnosing or treating conditions responsive to the antibody or PRO
                                                       Human; secreted and transmembrane protein; PRO; antibody therapy; pharmaceutical; diagnostic; biosensor; bioreactor.
                                                                                                                                                                                                                                                                                                                                                     Goddard A, Godowski PJ;
Wood WI;
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                  Novel human secreted and transmembrane protein PRO1864
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100.0%; Pred. No. 26;
iive 0; Mismatches
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Watanabe CK,
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                                                                                                                                                                                                                                  01-MAY-2002; 2002US-00063515.
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                                                                                                                                                                                                                                                                         06-DEC-2001; 2001US-00006867
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Best Local Similarity 100.
Matches 6; Conservative
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Grimaldi JC, Gurney AL,
                                                                                                                                                                                                                                                                                                                (GETH ) GENENTECH INC
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                                                                                                                                                    US2003018173-A1
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                                                                                                                 Homo sapiens
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention relates to three hundred and five nucleic acids encoding PRO polypeptides (secreted and transmembrane). Methods and compositions of the present invention are useful for the diagnosis, prevention and/or treatment of tumours, such and an advantage and transpectation or liver tumours. The PRO polypeptides are also useful as molecular weight markers, or for chromosome identification. The PRO genes are useful as hybridisation probes, or for screening libraries of human CDNA, genomic DNA or mRNA. The PRO genes may also be used in gene therapy, particularly for replacing a defective gene. The present sequence represents a human PRO polypeptide of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Three hundred and five nucleic acids encoding secreted and transmembrane PRO polypeptides, useful for the diagnosis, prevention and/or treatment of tumors, such as adrenal, lung, colon, breast, prostate, rectal,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gurney AL;
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ith V, Watanabe CK, Wood WI, Zhang Z;
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100.0%; Pred. No. 26;
tive 0; Mismatches
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05-JUN-2001; 2001US-00874503.
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20-DEC-2000; 2000US-00747259
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15-JAN-2002; 2002US-00052586
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cervical or liver tumors.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (GETH ) GENENTECH INC.
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N-PSDB; ACA66566.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 234 AA;
                                                                   08-NOV-2000;
08-NOV-2000;
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Pan J,

RESULT 37
ABU90882
ID ABU90
XX
AC ABU90
XX
DT 11-JU

Matches

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Gaps

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Indels

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The invention relates to an antibody that binds to a secreted or transmembrane protein designated PRO1446 appearing as ABO33941. The protein is one of 84 PRO polypeptides which (along with their encoding nucleic acids) are disclosed in the specification. The methods and compositions of the present invention are useful for the preparation of amedicament for the treatment of disorders associated with the aberrant expression or activity of the PRO polypeptide, such as tumour conditions and cancer. They can also be used to generate transgenic or knockout animals useful in the development and screening of therapeutically useful reagents. The PRO polypeptides and encoding nucleic acids can be used as molecular weight markers for protein electrophoresis, chromosome identification and tissue typing. The antibodies may be used in various diagnostic, competitive binding and/or immunoprecipitation assays. The present sequence represents a PRO polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New isolated antibody specifically binding a PRO polypeptide, useful for the preparation of a medicament for treating disorders with the aberrant expression or activity of the PRO polypeptide, such as tumor conditions and cancer.
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                                                 99WO-USO10733.
99US-00380137.
99US-00380139.
99US-00380142.
99US-00403297.
99US-00403297.
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2000WO-US005601.
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2000US-00664610.
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66.7%; Score 6; DB 6; Length 234; 100.0%; Pred. No. 26;

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Query Match

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C;Species: Treponema pallidum subsp. pallidum (syphilis spirochete)
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C;Date: 24-Jul-1998 #sequence_revision 24-Jul-1998 #text_change 09-Jul-2004
C;Date: 24-Jul-1998 #sequence_revision 24-Jul-1998 #text_change 09-Jul-2004
C;Date: 24-Jul-1998 #sequence_revision 24-Jul-1998 #text_change 09-Jul-2004
R;Fraser, C.M.; Norris, S.J.; Weinstock, G.M.; White, O.; Sutton, G.G.; Dodson, R.; Gorier 281, 375-388, 1998
A;Fraser, C.M.; Norris, S.J.; Weinstock, G.M.; White, O.; Sutton, G.G.; Dodson, R.; McDor 1987, 1.; Weidman, J.; Smith, H.O.; Venter, J.C.
S;Censsion, A.; San 1998
A;Fratus: A71250; MUID:98332770; PMID:9665876
A;Residues: A71250; MUID:98332770; PMID:9665876
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A;Residues: 1-137 <COL>
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C;A
                                                                                                                                                                                                         Grappa chain - African clawed frog
C;Species: Xenopus laevis (African clawed frog)
C;Species: Xenopus laevis (African clawed frog)
C;Accession: S14077
R;Schwager, J.; Buerckert, N.; Schwager, M.; Wilson, M.
EMBO J. 10, 505-511, 1991
A;7tile: Evolution of immunoglobulin light chain genes: analysis of Xenopus IgL isotypes
A;7tile: Evolution of immunoglobulin light chain genes: analysis of Xenopus IgL isotypes
A;7tile: Evolution of immunoglobulin light chain genes: analysis of Xenopus IgL isotypes
A;7tile: Evolution of immunoglobulin light chain genes: analysis of Xenopus IgL isotypes
A;7tile: Evolution of immunoglobulin limmunoglobulin homology
C;Superfamily: immunoglobulin v region; immunoglobulin
C;Keywords: heterotetramer; immunoglobulin
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C;Superfamily: syphilis spirochete hypothetical protein TP0563
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A03862
Spychterical protein E-115 - human adenovirus 2
C;Species: Mastadenovirus h2 (human adenovirus 2)
C;Date: 31-Mar-1992 #sequence_revision 31-Mar-1992 #text_change 09-Jul-2004
C;Accession: A03862
C;Accession: A03862
A;Gingeras, T.R.; Sciaky, D.; Gelinas, R.E.; Bing-Dong, J.; Yen, C.E.; Kelly, M.M.; Bull J. Biol. Chem. 257, 13475-13491, 1982
A;Title: Nucleotide sequences from the adenovirus-2 genome.
A;Reference number: A92351; MUID:83056843; PMID:7142161
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A,Molecule type: DDA
A,Residues: 1-15 <GIN>
A,Cross-references: UNIPROT:P03290, UNIPARC:UP100001392BS
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100.0%; Pred. No. 32;
ive 0; Mismatches
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S54242
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T18052
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Best Local Similarity 100.0
....hes 5; Conservative
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Gaps

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C; Superfamily: maize stripe virus major noncapsid protein

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C;Accession: F90534

R;Chambaud, I:; Heilig, R.; Ferris, S.; Barbe, V.; Samson, D.; Galisson, F.; Moszer, I.;
Nucleic Acids Res. 29, 2145-2153, 2001

Nucleic Acids Res. 29, 2145-2153, 2001

A;Fitle: The complete genome sequence of the murine respiratory pathogen Mycoplasma pulmc
A;Reference number: A99512; MUID:21267165; PMID:11353084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A,Cross-references: UNIPROT:Q98R28; UNIPARC:UPI00000D4589; GB:AL445566; PID:g14089595; PJ
A,Experimental source: strain UAB CTIP
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A;Molecule type: DNA
A;Residues: 1-208 <HENA
A;Residues: 1-208 <HENA
A;Cross-references: UNIPROT:076574; UNIPARC:UPI00007CD7A; EMBL:AF077534; PIDN:AAC26289.)
A;Experimental source: strain Bristol N2; clone K07D4
C;Genetics:
                                                                                                                                                                                                                                                                                                                                            transcription antitermination protein [imported] - Mycoplasma pulmonis (strain UAB CTIP)
C;Species: Mycoplasma pulmonis
C;Date: 24-May-2001 #sequence_revision 24-May-2001 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C;Species: Caenorhabditis elegans
C;Date: 29-Oct-1999 #sequence_revision 29-Oct-1999 #text_change 31-Dec-2004
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                                   Length 178;
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R, Henkhaus, J.; Wohldmann, P.
submitted to the EMBL Data Library, July 1998
A, Description: The sequence of C. elegans cosmid K07D4.
A, Reference number: Z21327
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                                DB 2;
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100.0%; Pred. No. 52;
iive 0; Mismatches
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100.0%; Pred. No. ...
                                                                                        0; Mismatches
                                Score 5; Pred. No.
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A;Introns: 25/3; 68/1; 127/1; 160/2
                                Query Match 55.6%; Best Local Similarity 100.0%; Matches 5; Conservative 0
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Best Local Similarity 100.
Matches 5; Conservative
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Best Local Similarity 100.
Matches 5; Conservative
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A;Residues: 1-196 <KUR>
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A;Genetic code: SGC3
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H69850
mucator MutT protein homolog yjhB - Bacillus subtilis
C.Species: Bacillus subtilis
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R.S. Bruck, B.S. Bruschi, C.V.; Caldwell, B.; Cappano, V.; Barter
C.; Broulllet, S.; Bruschi, C.V.; Caldwell, B.; Cappano, V.; Carter, N.M.; Ch.
A.Authors: Foulger, D.; Fritz, C.; Fujita, M.; Fujita, Y.; Fuma, S.; Galizzi, A.; Galler
A.Authors: Foulger, D.; Fritz, C.; Fujita, M.; Fujita, Y.; Fuma, S.; Galizzi, A.; Galler
iech, J.; Harwood, C.R.; Henaut, A.; Hilbert, H.; Holsappel, S.; Hosono, S.; Hullo, M.F.
Koetter, P.; Koningstein, G.; Krogh, S.; Kumano, M.; Kurita, K.; Lapidus, A.; Ladinois,
A.Authors: Lauber, J.; Lazarevic, V.; Lee, S.M.; Levine, A.; Liu, H.; Masudel,
Y. M.; Ogawa, K.; Oglwara, A.; Oudega, B.; Rose, M.; Sadaie, Y.; Sato, T.; Scanlon,
A.Authors: Schleich, S.; Schroeter, R.; Socifone, F.; Sekiguchi, J.; Sckowska, A.; Serok
A.Authors: Schleich, S.; Schroeter, P.; Yoshida, R.; Alther Complete genome sequence of the Gram-positive bacterium Bacillus subtilis.
A.Rittle: The complete genome sequence of the Gram-positive bacterium Bacillus subtilis.
A.Riccession: H69850
                                                                               A,Cross-references: UNIPROT:016641; UNIPARC:UP10000075172; GB:chr_II; PIDN:AB66113.1; Pi
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A;Residues: 1-170 <KUN>
A;Cross-references: UNIPROT:O34488; UNIPARC:UPI000060253; GB:Z99110; GB:AL009126; NID:g
A;Experimental source: strain 168
C;Genetics:
A;Gene: yjhB
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R;Zhu, Y.; Hayakawa, T.; Toriyama, S.
J. Gen. Virol. 73, 1309-1312, 1992
A;Ttle: Complete nucleotide sequence of RNA 4 of rice stripe virus isolate T, A;Reference number: JQ1547; MUID:92268894; PMID:1588328
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C;Species: rice stripe virus
C;Date: 17-Apr.1993 #sequence_revision 17-Apr-1993 #text_change 09-Jul-2004
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C;Superfamily: Caenorhabditis elegans hypothetical
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100.0%; Pred. No. ...
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A;Residues: 1-178 <ZHU>
                                                    A;Residues: 1-168 <STO>
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30 TWFLR 34
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A;Status: preliminary
A;Molecule type: DNA
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C;Accession: Caulobacter Carlobacter Complete Genome Sequence Caulobacter crescentus.
A;Reference number: A87249; MuID:21173698; PMID:11259647
C;Species: Arabidopsis thaliana (mouse-ear cress)
C;Date: 16-Feb-2001 #sequence_revision 16-Feb-2001 #text_change 09-Jul-2004
C;Accession: A85018
R;Accession: A85018
Nature 402, 769-777, 1999
A;Title: Sequence and analysis of chromosome 4 of the plant Arabidopsis thaliana.
A;Reference number: A85001; MUID:20083488; PMID:10617198
A;Status: preliminary
A;Status: DNA
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A;Experimental source: strain A3(2)
C;Genetics:
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A;Molecule type: DNA
A;Residues: 1-224 <STO>
A;Crossi-references: UNIPROT:Q9A3B2; UNIPARC:UPI0000C7A0F; GB:AE005673; NID:g13424986;
C;Genetics:
A;Gene: CC3292
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A;Reference number: 221581
A;Accession: T35525
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
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Date: 05-Nov-1999 #sequence_revision 05-Nov-1999 #text_change 09-Jul-2004
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100.0%; Pred. No. 52;
ive 0; Mismatches
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C; Superfamily:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       16 IETWF 22
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Drottein COSE4.8 [imported] - Caenorhabditis elegans
Cypecies: Caenorhabditis elegans
Cypecies: Caenorhabditis elegans
Cypecies: Caenorhabditis elegans
Cypecies: 10-May-2001 #sequence_revision 10-May-2001 #text_change 09-Jul-2004
Cypecesion: C88939
Ryanonymous, The C. elegans Sequencing Consortium.
Science 282, 2012-2018, 1998
Ayitle: Genome sequence of the nematode C. elegans: a platform for investigating biology
Ayitle: Genome sequence of the nematode C. elegans: a platform for investigating biology
Ayitle: Genome sequence of the nematode C. elegans, and www_sanger.ac.uk/Projects/C_elegans/Ayote: published errata appeared in Science 283, 35, 1999; Science 283, 2103, 1999; and
Ayote: published errata appeared in Science 283, 35, 1999; Science 283, 2103, 1999; and
Ayote: DNA
Ayote: DNA
Ayote: Sequences: UNIPROT:017356; UNIPARC:UPI0000082F2F; GB:chr_V; PIDN:AAB71277.1; PIF
Cycenetics: Similar to C. elegans TC3 transposase (SP:34257)
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A,Note: this species has also been called Salmonella typhi
C,Date: 09-Nov-2001 #sequence_revision 09-Nov-2001 #text_change 18-Nov-2002
C,Accession: AF0656
R,Parkhill, J; Dougan, G; James, K.D; Thomson, N.R.; Pickard, D; Wain, J; Churcher, th, T; Connerton, P; Cronin, A, Davis, P; Davies, R.M.; Dowd, L.; White, N.; Farrar, S. S; O'Gaora, P. Nature 413, 848-852, 2001
A,Authors: Parry, C.; Quail, M.; Rutherford, K.; Simmonds, M.; Skelton, J.; Stevens, K.; A; Reference number: AB0502; MUD:21534947; PMID:11677608
A,Accession: AF0656
A,Accession: AF0656
A,Accession: AF0656
A,Accession: AF0656
A,Accession: AF0650
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C;Superfamily: Caenorhabditis transposon Tc1 hypothetical 32K protein
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100.0%; Pred. No. 57;
ive 0; Mismatches
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100.0%; Pred. No. 55;
ive 0; Mismatches
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dengue serotype2 1.rpr

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hypothetical protein - Synechocystis sp. (strain PCC 6803)
C;Species: Synechocystis sp.
A;Variety: PCC 6803
A;Variety: PCC 6803
C;Date: 25-Apr-1997 #sequence_revision 25-Apr-1997 #text_change 09-Jul-2004
C;Accession: S75903 #sequence_revision 25-Apr-1997 #text_change 09-Jul-2004
C;Accession: S75903 #sequence_revision 25-Apr-1997 #text_change 09-Jul-2004
R;Kaneko, T.; Sato, S.; Kotani, H.; Tanaka, A.; Asamizu, E.; Nakamura, Y.; Miyajima, N.;
D, K.; Okumura, S.; Shimpo, S.; Takeuchi, C.; Wada, T.; Watanabe, A.; Yamada, M.; Yasuda, DNA Res. 3, 109-116, 1996
A;Title: Sequence analysis of the genome of the unicellular cyanobacterium Synechocystis
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A;Residues: 1-247 <KAN>
A;Cross-references: UNIPROT:P74268; UNIPARC:UPI00001290CE; EMBL:D90913; GB:AB001339; NID
A;Note: the nucleotide sequence was submitted to the EMBL Data Library, June 1996
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R;Perna, N.T.; Plunkett III, G.; Burland, V.; Mau, B.; Glasner, J.D.; Rose, D.J.; Mayhew, iller, L.; Grotbeck, E.J.; Davis, N.W.; Lim, A.; Dimalanta, E.; Potamousis, K.; Apodaca, Nature 409, 529-533, 2001
A;Title: Genome sequence of enterohemorrhagic Escherichia coli O157:H7.
A;Reference number: A85480; MUID:21074935; PMID:11206551
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A;Experimental source: strain O157:H7, substrain BDL933
C;Genetics:
                                         A;Molecule type: DNA
A;Residues: 1-244 <KUR>
A;Cross-references: UNIPROT:034170; UNIPARC:UPI0000D1464; GB:AE007869; PIDN:AAK86370.1;
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C.Date: 16-Feb-2001 #sequence_revision 16-Feb-2001 #text_change 14-Sep-2001
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o. 59;
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Best Local Similarity 100.0%; Pred. No. 59;
Matches 5; Conservative 0; Mismatches
                                                                                                                                                                 C,Genetics:
A,Gene: AGR C 982
A,Map position: circular chromosome
C,Superfamily: rod protein flgF
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A, Status: preliminary
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A;Status: preliminary
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A;Molecule type: DNA
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C;Genetics:
A;Gene: CESP:ZC64.1
C;Superfamily: Caenorhabditis transposon Tcl hypothetical 32K protein
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A;Molecule type: DNA
A;Residues: 1-244 «KUR»
A;Cross-references: UNIPROT:O34170; UNIPARC:UP100000D1464; GB:AE008688; PIDN:AAL41575.1;
A;Experimental source: strain CS8 (Dupont)
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C;Species: Agrobacterium tumefaciens
C;Date: 30-Sep-2001 #sequence_revision 30-Sep-2001 #text_change 05-Oct-2004
C;Accession: A97427
R;Goodner, B.; Hinkle, G.; Gattung, S.; Miller, N.; Blanchard, M.; Qurollo, B.; Goldman, A.; Liu, F.; Wollam, C.; Allinger, M.; Doughty, D.; Scott, C.; Lappas, C.; Markelz, B.; Science 294, 2323-2328, 2001
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A;Reference number: A97359; MUID:21608551; PMID:11743194
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Yitle: The Genome of the Natural Genetic Engineer Agrobacterium tumefaciens C58.
A;Reference number: AB2577; MUID:21608550; PMID:11743193
A;Accession: A12644
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                  hypothetical protein ZC64.1 - Caenorhabditis elegans
Cispecies: Caenorhabditis elegans
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Cispecies: Caenorhabditis elegans
Cispecies: Toct-1999 #sequence_revision 15-Oct-1999 #text_change 09-Jul-2004
Cispecies: Toct-1999 #sequence 09-Jul-2004
Risentley, D.
Submitted to the EMBL Data Library, October 1995
Aiseribtion: The sequence of C. elegans cosmid ZC64.
Aiseribtion: The sequence of C. elegans cosmid ZC64.
Aiseribtion: T27636
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Aiseribtion: Taenslated from GB/EMBL/DDBJ
Aimolecule type: DNA
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55.6%; Score 5; DB 2;
Best Local Similarity 100.0%; Pred. No. 58;
Matches 5; Conservative 0; Mismatches
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100.0%; Pred. No. 59;
iive 0; Mismatches
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A,Cross-references: UNIPROT:Q8X618; UNIPARC:UPI0000D0C14; GB:AE005174; NID:g12515668; P)
A,Experimental source: strain 0157:H7, substrain EDL933
C,Genetics:
A,Gene: 22.866
C,Superfamily: Escherichia coli hypothetical protein b1669
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Cipate: 18-Jul-2001 #sequence_revision 18-Jul-2001 #text_change 31-Dec-2004
Cipate: 18-Jul-2001 #sequence_revision 18-Jul-2001 #text_change 31-Dec-2004
Cipate: 18-Jul-2001 #sequence_revision 18-Jul-2001 #text_change 31-Dec-2004
Sitayashi, T.; Makino, K.; Ohnishi, M.; Kurokawa, K.; Ishii, K.; Yokoyama, K.; Han, C.G.;
Gasawara, N.; Yasunaga, T.; Kuhara, S.; Shiba, T.; Hattori, M.; Shinagawa, H.
DNA Res. 8, 11-22, 2001
A;Title: Complete genome sequence of enterohemorrhagic Escherichia coli O157:H7 and genome A;Title: Complete genome sequence of enterohemorrhagic Escherichia coli O157:H7 and genome A;Tatus: preliminary
A;Accession: E91027
A;Status: preliminary
A;Rose-references: UNIPROT: OBXCTO; UNIPARC: UPI0000000433; GB: BA000007; PIDN: BAB35612.1;
A;Experimental source: strain O157:H7, substrain RIMD 0509952
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E91027
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                                                                                                                                                                                                   Cispecies: Escherichia coli
Cispecies: Escherichia coli
Cispecies: Escherichia coli
Cispecies: 12-Sep-1997 #sequence_revision 17-Sep-1997 #text_change 01-Mar-2002
Cisacession: H65058
RiBlattner, F.R.; Plunkett III, G.; Bloch, C.A.; Perna, N.T.; Burland, V.; Riley, M.; Cc.A.; Rose, D.J.; Mau, B.; Shao, Y.
Science 274 H53-1462, 1997
A; Rose, D.J.; Mul B.; Shao, Y.
A; Ritle: The complete genome sequence of Escherichia coli K-12.
A; Reference number: A64720; MUID:97426617; PMID:9278503
A; Accession: H65058
A; Accession: H65058
A; Accession: Preliminary; nucleic acid sequence not shown; translation not shown
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A;Residues: 1-270 <BLAT-
A;Cross-references: UNIPROT:P77147; UNIPARC:UP1000013A9BC; GB:AE000262; GB:U00096; NID:g
A;Experimental source: strain K-12, substrain M01655
C;Superfamily: Escherichia coli hypothetical protein b1669
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A;Cross-references: UNIPARC:UPI0000168160; GB:AE000360; GB:U00096; NID:g2367157; PIDN:AA
A;Experimental source: strain K-12, substrain MG1655
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C;Date: 16-Feb-2001 #sequence_revision 16-Feb-2001 #text_change 09-Jul-2004
C;Accession: D85774
R;Perran N. T.; Plunkett III, G.; Burland, V.; Mau, B.; Glasner, J.D.; Rose, D.J.; Mayhew
Iller, L.; Grotbeck, E.J.; Davis, N.W.; Lim, A.; Dimalanta, E.; Potamousis, K.; Apodaca,
Nature 409, 529-533, 2001
A;Title: Genome sequence of enterohemorrhagic Escherichia coli O157:H7.
A;Reference number: A88480; MUID:21074935; PMID:11206551
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hypothetical protein b1669 - Escherichia coli (strain K-12)

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Best Local Similarity 100.0%; Pred. No. 63;
Matches 5; Conservative 0; Mismatches
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A;Molecule type: DNA
A;Residues: 1-270 <STO>
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99 IETWF 103
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55.6%; Score 5; DB 2;
100.0%; Pred. No. 71;
tive 0; Mismatches
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Matches 5; Conservative 0
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A; Residues: 1-312 <HEI>
A;Residues: 1-300 <WAG>
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                                                                                  C;Genetics:
A;Gene: CESP:K07C6.14
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                                                                                           Pypothetical protein yfcI [imported] - Escherichia coli (strain O157:H7, substrain EDL93 C) Species: Escherichia coli (species: Escherichia Species: Escherichia Species: Illi, G.; Burland, V.; Mau, B.; Glasner, J.D.; Rose, D.J.; Mayhew Nature 409, 529-533, 2001
A; Title: Genome sequence of enterohemorrhagic Escherichia coli O157:H7.
A; Reference number: A85480; MUD:21074935; PMID:11206551
A; Residues: preliminary
A; Molecule type: DNA
A; Molecule type: DNA
A; Residues: 1-296 <STO>
A; Experimental source: strain O157:H7, substrain EDL933;
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d965002
hypothetical protein b2305 - Escherichia coli (strain K-12)
c;Species: Escherichia coli
c;Species: Escherichia coli
c;Species: Escherichia coli
c;Species: Date: 12-Sep-1997 #sequence_revision 17-Sep-1997 #text_change 31-Dec-2004
c;Accession: 655002
R;Blattner, P.R.; Plunkett III, G.; Bloch, C.A.; Perna, N.T.; Burland, V.; Riley, M.; Cc
science 27, 1453-1462, 1997
A;Title: The complete genome sequence of Escherichia coli K-12.
A;Reference number: A64720; MUID:97426617; PMID:9278503
A;Accession: 655002
A;Accession: 655002
A;Accession: 655002
A;Amolecule type: DNA
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A;Experimental source: strain K-12, substrain MG1655
C;Superfamily: human PML-1 protein
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C;Species: Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Accession: T32681
R;Wagner-McPherson, C.; Gillam, B.
submitted to the RMBL Data Library, December 1997
A;Description: The sequence of C. elegans cosmid KO7C6.
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A;Molecule type: DNA
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A;Gene: yfcI
C;Superfamily: human PML-1 protein
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RiHeidelberg, J.F.; Eisen, J.A.; Nelson, W.C.; Clayton, R.A.; Gwinn, M.L.; Dodson, R.J.; chardson, D.; Ermolaeva, M.D.; Vamathevan, J.; Bass, S.; Qin, H.; Dragoi, I.; Sellers, P. I. R.R.; Mekalanos, J.J.; Venter, J.C.; Fraser, C.M.
Nature 406, 477-483, 2000
A;Title: DNA Sequence of both chromosomes of the cholera pathogen Vibrio cholerae.
A;Reference number: A82035; MUID:20406833; PMID:10952301
A;Cross-references: UNIPROT:O44645; UNIPARC:UPI0000079677; EMBL:AF039049; PIDN:AAB94256.
A;Experimental source: strain Bristol N2; clone K07C6
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A;Authors: Gnehm, C.L.; McDonald, L.A.; Small, K.V.; Fraser, C.M.; Smith, H.O.; Venter, A;Title: Whole-genome random sequencing and assembly of Haemophilus influenzae Rd. A;Reference number: A64000; MUID:95350630; PMID:7542800
A;Accession: D64122
A;Accession: D64122
A;Accession: A;Accession: D64122
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C;Species: Haemophilus influenzae
C;Date: 18-Aug-1995 #sequence_revision 18-Aug-1995 #text_change 09-Jul-2004
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C;Superfamily: Caenorhabditis transposon Tc1 hypothetical 32K protein
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A;Title: Complete genome sequence of a multiple drug resistant Salmonella enterica serove A;Reference number: AB0502; MUID:21534947; PMID:11677608
A;Accession: AE1068
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-321 <PAR>
A;Cross-references: UNIPARC:UPI000005A9BD; GB:AL513382; PIDN:CAD03364.1; PID:gl6505636; C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           hypotherical protein MJ1537 - Methanococcus jannaschii C;Species: Methanococcus jannaschii C;Species: Methanococcus jannaschii C;Species: Methanococcus jannaschii C;Species: Methanococcus jannaschii C;Species: Methanococcus jannaschii Jasep-1996 #sequence_revision 13-Sep-1996 #text_change 09-Jul-2004 C;Accession: H64491 M.C.; Chro, L.; Fleischmann, R.D.; Sutton, G.G.; Blake, i. R;Bult, C.J.; White, O.; Olsen, G.J.; Zhou, L.; Fleischmann, R.D.; Sutton, G.G.; Blake, i. R;Bult, C.J.; Morebek, R.; Kirkness, E.F.; Weinstock, K.G.; Merrick, J.M.; Glodek, A.; Reich, C.I.; Overbeek, R.; Kirkness, E.F.; Weinstock, K.M.; Hurst, M.A.. Glodek, A.; Roince 273, 1058-1073, 1996
A;Authors: Kaine, B.P.; Borodovsky, M.; Klenk, H.P.; Fraser, C.M.; Smith, H.O.; Woese, C. A;Title: Complete genome sequence of the methanogenic archaeon, Methanococcus jannaschii. A;Reference number: A64300; MUID:96337999; PMID:8688087
A;Accession: H64491
A;Residues: preliminary; nucleic acid sequence not shown; translation not shown A;Molecule type: DNA
A;Residues: 1-343 < UNIPACT:058932; UNIPARC:UPI000013AD2A; GB:U67594; GB:L77117; NID:9155: C;Genetics: DEVISIANA; Constricts and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Constructs and Con
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C;Species: Streptomyces rimosus
C;Species: Streptomyces rimosus
C;Bate: 03-Mar-1994 #sequence_revision 03-Mar-1994 #text_change 09-Jul-2004
C;Accession: 446567
R;Reynes, J.P.; Calmels, T.; Drocourt, D.; Tiraby, G.
J. Gen. Microbiol. 134, 585-598, 1988
A;Title: Cloning, expression in Escherichia coli and nucleotide sequence of a tetracyclir
A;Reference number: A46567, MuID:89036114; PMID:3053973
A;Reference preliminary
A;Residues: 1-347 <REY>
A;Molecule type: DNA
A;Residues: 1-347 <REY>
A;Cross-references: UNIPROT:P14551; UNIPARC:UPI0000136B1D; GB:M20370; NID:g153503; PIDN:7
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C;Superfamily: Methanococcus jannaschii hypothetical protein MJ1537
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C;Superfamily: human PML-1 protein
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Best Local Similarity 100.
Matches 5; Conservative
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548036
hypothetical protein - kiwi fruit
c;58pcies: Actinidia chinensis var. deliciosa (kiwi fruit)
C;5pcies: Actinidia chinensis var. deliciosa (kiwi fruit)
C;5pcies: 26-Dec-1994 #sequence_revision 27-Feb-1997 #text_change 17-Mar-1999
C;Date: 26-Dec-1994 #sequence_revision 27-Feb-1997 #text_change 17-Mar-1999
R;Ledger, S.E.; Gardner, R.C.
Plant Mol. Biol. 25, 877-886, 1994
Plant Mol. Biol. 25, 877-886, 1994
A;Title: Cloning and characterization of five cDNAs for genes differentially expressed A;Reference number: 848035; WUID:94355660; PMID:8075403
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A, Residues: 1-317 <LED>
A, Cross-references: UNIPARC:UPI000012DB29; EMBL:L27809; NID:g450236; PID:g450237
A, Note: the nucleotide sequence was submitted to the EMBL Data Library, January 1994
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                55.6%; Score 5; DB 2;
100.0%; Pred. No. 72;
tive 0; Mismatches
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100.0%; Pred. No. 73;
tive 0; Mismatches
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Best Local Similarity 10v..
5, Conservative
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Matches 5; Conservative
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A;Authors: Wallin, B.; Hayes, W.S.; Borodovsky, M.; Karpk, P.D.; Smith, H.O.; Fraser, C.; A;Title: The complete genome sequence of the gastric pathogen Helicobacter pylori.
A;Reference number: A64520; MUID:97394467; PMID:9252185
                                                                                                                                                                                                                                                                               A;Cross-references: UNIPROT:025311; UNIPARC:UPI00000D30AB; GB:AE000572; GB:AE000511; NID C;Superfamily: Helicobacter pylori 2-oxoacid ferredoxin oxidoreductase; 2-oxoacid ferredoc; Keywords: oxidoreductase C;Keywords: oxidoreductase F;5-186/Domain: 2-oxoacid ferredoxin oxidoreductase homology <FEO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CjAccession: G71919
R;Alm, R.A.; Ling, L.S.L.; Moir, D.T.; King, B.L.; Brown, E.D.; Doig, P.C.; Smith, D.R.; Javes, C.; Gibbon, R.; Merberg, D.; Mills, S.D.; Jiang, Q.; Taylor, D.E.; Vovis, G.F.; Jattere 397, 716-180, 1999
A;Title: Genomic sequence comparison of two unrelated isolates of the human gastric paths A;Reference number: A71800; MUID:99120557; PMID:9923682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Accession: G71919
A;Status: preliminary
A;Molecule type: DNA
A;Molecule type: DNA
A;Residues: 1-375 <ARN>
A;Cross-references: UNIPROT:09ZLP1; UNIPARC:UPI0000D364E; GB:AE001486; GB:AE001439; NID
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C;Superfamily: Helicobacter pylori 2-oxoacid ferredoxin oxidoreductase; 2-oxoacid ferredo P;5-186/Domain: 2-oxoacid ferredoxin oxidoreductase homology <FGO>
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R;Theologis, A.; Ecker, J.R.; Palm, C.J.; Federspiel, N.A.; Kaul, S.; White, O.; Alonso, Chin, C.W.; Chung, M.K.; Conn, L.; Conway, A.B.; Conway, A.R.; Creasy, T.H.; Dewar, K.; ansen, N.F.; Hughes, B.; Huizar, L.
Nature 408, 816-820, 2000
Athuthors: Hunger, J.L.; Jenkins, J.; Johnson-Hopson, C.; Khan, S.; Khaykin, E.; Kim, C., C.A.; Li, J.H.; Li, Y.; Lin, X.; Liu, S.X.; Liu, Z.A.; Luros, J.S.; Maiti, R.; Marziali, Rizzo, M.; Rooney, T.; Rowley, D.; Sakano, H.
Rizzo, M.; Rooney, T.; Rowley, D.; Sakano, H.; Shinn, P.; Southwick, A.M.; Sun, H.; Tallon, I ker, M.; Wu, D.; Yu, G.; Fraser, C.M.; Venter, J.C.; Davis, R.W.
A;Hitle: Sequence and analysis of chromosome 1 of the plant Arabidopsis.
                                                                                                                                             A,Accession: E64593
A,Status: preliminary, nucleic acid sequence not shown; translation not shown
A,Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Variety: strain J99
C;Date: 12-Feb-1999 #sequence_revision 12-Feb-1999 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            hypothetical protein F1M20.17 [imported] - Arabidopsis thaliana
C;Species: Arabidopsis thaliana (mouse-ear cress)
C;Date: 02-Mar-2001 #sequence_revision 02-Mar-2001 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  chain of 2-oxoglutarate oxidoreductase - Helicobacter pylori (strain J99)
C,Species: Helicobacter pylori
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Indels
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Best Local Similarity 100.0%; Pred. No. 84;
Matches 5; Conservative 0; Mismatches
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       388, 539-547, 1997
                                                                                                                                                                                                                                                     A, Residues: 1-375 <TOM>
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| 124 FLRHP 128
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A;Status: preliminary
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                                                                                                                                                                                                                                                                                                                                       Submitted to the EMBL Data Library, December 1995
A.Description: The sequence of C. elegans cosmid T25G12.
A.Reference number: Z21515
A.Accession: T34382
A.Accession: T34382
A.Actus: preliminary; translated from GB/EMBL/DDBJ
A.Follower: DNA
A.Residues: 1-358 < DNZ>
A.Follower: DNZ>
A.Cross-references: UNIPROT:Q22789; UNIPARC:UPI0000081C10; EMBL:U43283; PIDN:AAC69023.1;
A.Experimental source: strain Bristol N2; clone T25G12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C;Species: Helicobacter pylori
C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 09-Jul-2004
C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 09-Jul-2004
C;Jaccession: E64593
R;Tomb, J.F.; White, O.; Kerlavage, A.R.; Clayton, R.A.; Sutton, G.G.; Fleischmann, R.D. Peterson, S.; Loftus, B.; Richardson, D.; Dodson, R.; Khalak, H.G.; Glodek, A.; McKenne son, J.D.; Kelley, J.M.; Cotton, M.D.; Weidman, J.M.; Fujii, C.; Bowman, C.; Watthey, L.
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N;Alternate names: 2-oxoacid:ferredoxin oxidoreductase (CoA-acetylating)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Accession: T06460
A;Status: translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Molecule type: mRNA
A;Residues: 1-368 <SAT>
A;Cross-references: UNIPROT:Q43085; UNIPARC:UPI00000A9D1C; EMBL:D86180; PIDN:BAA13032.1
A;Experimental source: var. Alaska
C;Genetics:
A;Genetics:
A;Genetics:
C;Keywords: glycosyltransferase; pentosyltransferase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       anthranilate phosphoribosyltransferase (EC 2.4.2.18) - garden pea (fragment)
NyAlternate names: phosphoribosylanthranilate transferase
C;Species: Pisum sativum (garden pea)
C;Date: 23-Apr-1999 #sequence_revision 23-Apr-1999 #text_change 09-Jul-2004
C;Accession: T06460
R;Sato, N.; Nazuno, A.; Ohta, N.; Ohshima, K.
Rjato, N.; Kazuno, A.; Ohta, N.; Ohshima, K.
A;Description: Isolation of a pea cDNA for phosphoribosylanthranilate transferase.
A;Reference number: 215694
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                                                                                                                                                                                                            C;Species: Caenorhabditis elegans
C;Date: 29-Oct-1999 #sequence_revision 29-Oct-1999 #text_change 09-Jul-2004
C;Accession: T34382
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A,Map position: X
C,Superfamily: Caenorhabditis transposon Tc1 hypothetical 32K protein
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                                                                                                                                                                           - Caenorhabditis elegans
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Pred. No. 81;
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100.0%; Pred. No. ...
0; Mismatches
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Best Local Similarity 100.
Matches 5, Conservative
                                                                                                                                                                               hypothetical protein T25G12.9
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Matches 5; Conservative
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231 FLRHP 235
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Length 415; 0; Indels

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Query Match 55.6%; Score 5; DB 2; Best Local Similarity 100.0%; Pred. No. 91; Matches 5; Conservative 0; Mismatches
A, Experimental source: strain C58 (Dupont)
C, Genetics:
A, Gene: nrtA
A, Genome: plasmid
C, Superfamily: nitrilotriacetate monooxygenase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Search completed: August 31, 2006, 10:48:04 Job time : 18.25 secs
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A;Molecule type: mRNA
A;Residues: 1-208, VV, 210-196 <RE2>
A;Cross-references: UNIPARC:UPI00000E79AC; EMBL:Z46925; NID:g854413; PIDN:CAA87033.1; PI
A;Genetics: Arc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        growth factor arg3.1 - rat
G;Species: Rattus norvegicus (Norway rat)
G;Species: Rattus norvegicus (Norway rat)
G;Date: 26-Jul-1996 #sequence_revision 26-Jul-1996 #text_change 09-Jul-2004
C;Accession 159168; I59386
R;Lyford, G.L.; Yamagata, K.; Kaufmann, W.E.; Barnes, C.A.; Sanders, L.K.; Copeland, N.G Neuron 14, 433-445, 1995
A;Title: Arc, a growth factor and activity-regulated gene, encodes a novel cytoskeleton-A;Reference number: IS8168; MUID:95161073; PMID:7857651
      A;Molecule type: DNA
A;Residues: 1-378 <STO>
A;Cresidues: 1-378 <STO>
A;Cresidues: UNIPROT:Q9CA65; UNIPARC:UPI00000A3E86; GB:AE005173; NID:g6539251; PI
C;Genetics:
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A;Rolecule type: mRNA
A;Molecule type: mRNA
A;Molecule type: mRNA
A;Molecule type: mRNA
A;Molecule type: mRNA
A;Cross-references: UNIPROT:Q62743; UNIPARC:UP100000E5C7E; EMBL:U19866; NID:g644828; PID
B;Link, W.; Konietzko, U.; Kauselmann, G.; Krug, M.; Schwanke, B.; Frey, U.; Kuhl, D.
Broc. Natl. Acad. Sci. U.S.A. 92, 5734-5738, 1995
A;Title: Somatodendritic expression of an immediate early gene is regulated by synaptic A;Reference number: IS9386; MUID:95296386; PMID:777577
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Molecule type: DNA
A;Residues: 1-415 <KCIR>
A;Cross-references: UNIPROT:Q8U674; UNIPARC:UPI00000D276A; GB:AE008690; FIDN:AAL46297.1;
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C;Species: Agrobacterium tumefaciens
C;Species: Agrobacterium tumefaciens
C;Date: 11-Jan-2002 #sequence_revision 11-Jan-2002 #text_change 09-Jul-2004
C;Accession: AG3235
R;Wood, D.W.; Setubal, J.C.; Kaul, R.; Monks, D.; Chen, L.; Wood, G.E.; Chen, Y.; Woo, I. erage, G.; Giller, W.; Grant, C.; Guenthner, D.; Kutyavin, T.; Levy, R.; Li, M.; McClell Karp, P.; Romerro. P.; Zhang, S.
Science 294, 2317-2323, 2001
A;Authors: Yoo, H.; Tao, Y.; Biddle, P.; Jung, M.; Krespan, W.; Perry, M.; Gordon-Kamm,
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A,Accession: AC3235
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A;Map position: 1
C;Superfamily: Kinase-related transforming protein; protein kinase homology
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071136_LACUL

046AP0_METBA

08TIM1_METAC

05CQ7_CENAS

09MISS_9TELE

03BRSS_9TELE

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NUCLECTIDE SEQUENCE [LARGE SCALE MRNA].

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NUCLECTIDE SEQUENCE [LARGE SCALE MRNA].

A Clark H.F., Gurney A.L., Abaya B., Baker K., Baldwin D.T., Brush J.,

Chen J., Chow B., Chui C., Crowley C., Currell B., Deuel B., Dowd P.,

Ra Eaton D., Foster J.S., Kiimowski L., Jin Y., Johnson S., Lee J.,

A Huang A., Kim H.S., Kiimowski L., Jin Y., Johnson S., Lee J.,

Ra Seshagiri S., Simmons L., Singh J., Smith V., Stinson J., Vagts A.,

Nandlen R.L., Wateanabe C., Wieand D., Woods K., Xie M.H.,

A vansura D.G., Yi S., Yu G., Yuan J., Zhang M., Zhang Z., Goddard A.D.,

Nood W.I., Godowski P.J. Gray A.M.;

The secreted protein discovery initiative (SPDI), a large-scale

The screted protein discovery initiative (SPDI), a large-scale

The fifort to identify novel human secreted and transmembrane proteins: a

The Conome Res. 13:2265-2270(2003).
               Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms Distributed under the Creative Commons Attribution-NoDerivs License
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MEDLINE-22737999; PubMed=12853948; DOI=10.1038/nature01782;
MIllier L.W., Pulton R.S., Fulton L.A., Graves T.A., Pepin K.H.,
Wagner-McPherson C., Layman D., Maas J., Jaeger S., Walker R.,
Wylie K., Sekhon M., Becker M.C., O'Laughlin M.D., Schaller M.E.,
Fewell G.A., Delehaunty K.D., Miner T.L., Nash W.E., Cordes M., Du H.,
Sun H., Gawards J., Bradshaw-Cordum H., Ali J., Andrews S., Isak A.,
Vanbrunt A., Nguyen C., Du F., Lamar B., Courtney L., Kalicki J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryoča, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
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07-FSB-2006, entry version 39.
MLN64 N-terminal domain homolog (STARD3 N-terminal-like protein).
Name=STARD3NL; Synonyms=MENTHO; ORFNames=UNQ855/PRO1864;
Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE=22384343; PubMed=12393907; DOI=10.1074/jbc.M208290200; Alpy F., Wendling C., Rio M.-C., Tomasetto C.; "MENTHO, a MLN64 homologue devoid of the START domain."; J. Biol. Chem. 277:50780-50787(2002).
                                                                                  EMBL, CP000009; AAW61446.1; -; Genomic_DNA.
GO; GO:0016787; F:hydrolase activity; IEA.
GO; GO:0008152; P:metabolism; IEA.
InterPro; IPR001300; HAD.3:
InterPro; IPR0013100; HAD.5F_IIB.
InterPro; IPR00150; Hydrolase; I.
Flam; PF00702; Hydrolase; I.
TIGRFAMS; TIGR01484; HAD-SF-IIB; I.
PROSITE; PS01229; COF 2; UNKNOWN 1.
Complete proteome; Hydrolase.
SEQUENCE 266 AA; 28559 MW; A20E08223C537EFE CRC64;
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10 OSFQAO.

AC OSFQAO.

DT 01-MAR-2005, integrated into UniProtKB/TrEMBL.

DT 01-MAR-2005, sequence version 1.

DT 01-MAR-2005, sequence version 6.

DE Putative hydrolase of the HAD superfamily.

O'FEB-2006, entry version 6.

DE Putative hydrolase of the HAD superfamily.

ON Televedocter oxydans (dluconobacter suboxydans).

OC Bacteria, Proteobacteria, Alphaproteobacteria; Rhodospirillales; OC Acetobacteraceae; Gluconobacter.

OC Acetobacteraceae; Gluconobacter.

OX NCBI TAXID=442;

RN NUCLECTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].

RC STRAIN=621H;

RX PUNGE C, Hoffmeister M, Liesegang H, Wiezer A., Fricke W.F.,

RA PRUS C, Hoffmeister M, Liesegang H, Wiezer U.;

RA Entereach A, Gottechalk G, Deppenmeier U.;

RA Entereach A, Gottechalk G, Deppenmeier U.;

RA Entereach A, Gottechalk G, Deppenmeier U.;

RY Oxydans ";

RI Nat. Biotechnol. 23:195-200(2005).
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PubMed=15665824; DOI=10.1038/nbt1062;
Prust C., Hoffmeister M., Liesegang H., Wiezer A., Fricke W.F.,
Ehrenreich A., Gottschalk G., Deppenmeier U.;
"Complete genome sequence of the acetic acid bacterium Gluconobacter oxydans.";
                                           0394t3
098b51
098b51
039c97
082b58
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082b58
082b50
084b21
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Q8R221 MOUSE
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Q5VB1_LACAC
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TISSUE-Brain, and Kidney,

MEDLINE-22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

Katausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

Klausner R.D., Collins F.S., Wagner L., Schaefer C.F., Ehat N.K.,

Altschul S.F., Zeeberg B.B., Barchow K.H., Schaefer C.F., Ehat N.K.,

Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

Batchenko L., Marusina K.R., Farmer A.A., Rubin G.M., Hong L.,

Stapleton M., Soares M.B., Bonaldo M.F., Carannori P., Prange C.,

Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,

Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

Multing M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,

Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,

Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,

"Generation and initial analysis of more than 15,000 full-length human
Ozersky P., Bielicki L., Scott K., Holmes A., Harkins R., Harris A., Strong C.M., Hou S., Tomlinson C., Dauphin-Kohlberg S., Kozlowicz-Reilly A., Leonard S., Rohlfing T., Rook S.M., Tin-Mollam A.-M., Abbott A., Minz P., Maupin R., Strowmatt C., Latreille P., Miller N., Johnson D., Murray J., Woesener J.P., Wendl M.C., Yang S.-P., Schultz B.R., Wallis d.W., Spheth J., A. Bieri T.A., Nelson J.O., Berkowicz N., Wohldmann P.E., Cook L.L., A. Hickenbotham M.T., Eldred J., Milliams D., Bedell J.A., Mardis B.R., Clifton S.W., Chissoe S.L., Marra M.A., Raymond C., Haugen E., Cook L.L., A. Simms E., Levy R., Clendenning J., Kaul R., Kent W.J., Furey T.S., Baerrsch R.A., Brent M.R., Keibler E., Flicek P., Bortk P., Suyama M., A. Bailey J.A., Portnoy W.E., Torrents D., Chinwalla A.T., Gish W.R., Wilson M.V., Eichler E.E., Green E.D., Waterston R.H., Wilson R.K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms Distributed under the Creative Commons Attribution-NoDerivs License
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /FTId=PRO_000021666.
MLN64 N-terminal domain homolog, isoform
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and mouse cDNA sequences.";
Proc. Natl Acad. Sci. U.S.A. 99:16899-16903(2002).
-!- SUBCELLULAR LOCATION: Integral membrane protein. Late endosomal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    membrane protein.
ALTERNATIVE PRODUCTS:
    Event-Alternative initiation;
    Comment=2 isoforms, 1 (shown here) and 2, are produced by
    alternative initiation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Extracellular (Potential)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    For isoform 2.
Cytoplasmic (Potential).
Potential.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cytoplasmic (Potential)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FTIG=PRO 0000021667.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL, AJ492267, CAD37353.1; -; MRNA.
EMBL, AX388645, AAQ89008.1; -; MENA.
EMBL, AC005033, AAS07552.1; -; Genomic_DNA.
EMBL, BC003074; AAH03074.1; -; MRNA.
EMBL, BC005959; AAH05959.1; -; MRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -!- PTM: Phosphorylated.
-!- SIMILARITY: Contains 1 MENTAL domain.
                                                                                                                                                                                                                                                                                                                                        NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Potential
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74
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122
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75
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119
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TRANSMEM
TOPO DOM
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NUCLECTILE SEQUENCE (LARGE SCALE MRNA) (ISOPCRMS 1 AND 2).

RX CATRINGC7STBL/60; TISSUECETEDIUM, and Kidney.

RA CATRINGC1P.

RA CATRINGC1P.

RA OYAMR R., Ravash T., Katayama S., GOUGH J., Frith M.C., Maeda N.,

RA OYAMR R., Ravash T., Lethard B., Wells C., Kodzius R., Shimokawa K.,

RA Davis M.J., Wilming LG., Aidinis V., Allen J.E.,

RA Ambesi.Tmpionabaco A., Apweiler R., Aturalya R.N., Bailey T.L.,

RA Ambesi.Tmpionabaco A., Apweiler R., Aturalya R.N., Bailey T.L.,

RA Ambesi.Tmpionabaco A., Dalympie B.P., Ge Bono B., Della Gatta G.,

RA Crowe M.L., Dalla E., Dalrympie B.P., Ge Bono B., Della Gatta G.,

RA Crowe M.L., Lalla E., Dalrympie B.P., Ge Bono B., Della Gatta G.,

RA Crowe M.L., Harbers M., Hayashi Y., Hensch T.K., Hickawa T.,

RA Crowe M.L., Jacono M., Teo W., Fraik M., Raibikwa T.,

RA Georgii-Hemming P., Gingeras T.R., Golobori T., Green R.E.,

RA Georgii-Hemming P., Karishnan S.P., Kruger A., Kummerfeld S.K.,

RA Cattanocich S., Harbers M., Hayashi Y., Hensch T.K., Hickawa T.,

RA Millas G., Kxishnan S.P., Kruger A., Kummerfeld S.K.,

RA Matsuda H., Matsuzawa S., Miki H., Migono R., Marchionni L.,

RA Milson R., Nishiguchi S., Nishikawa S., Nori F., Ohara O.,

RA Mottagui-Tabar S., Mulder N., Nakano W., Nakano W., Nakano W., Nakano W., Nakano W., Nakano W., Senosi. S., Rore B., Ruan Y., Salaberg S.L., Sandelin A., Schneider C., Sekiguchi K., Semple C.A., Senosi. Senosi. Senosi. Senosi. Sheng Y.,

RA Schonbach C., Sekiguchi K., Semple C.A., Senosi C.L., Yagi K.,

RA Shibata Y., Shimada H., Shimada K., Silva D., Sinclair B.,

Rammoja K., Tan S.L., Tang S., Taylor M.S., Tegner J., Teichmann S.A.,

RA Sperling S., Stupka E., Sugiura K., Sultana R., Takenaka Y., Teichmann S.A.,

RA Shamanishi H., Zabarcvsky B., Ston M., Wai, C.L., Yagi K.,

RA Manaleeted C., Mattick J.S., Hume D.A., Kai C., Saasai D., Tomaru Y.,

RA Malneeted C., Mattick J.S., Hume D.A., Kai C., Saasai D., Tomaru Y.,

RA Hindered C., Mattick J.S., Hume D.A., Kai C., Saasai D., Tomaru Y.,

RA Hindered C., Mattick J.S., Hume D.A., Kai C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Glires, Rodentia, Sciurognathi,
Muroidea, Muridae, Murinae, Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      , Imamura K., Itoh M., Kato T., Kawaji H., Kawagashira N., Iina T., Kojima M., Kondo S., Konno H., Nakano K., Ninomiya N., T., Okada M., Plessy C., Shibata K., Shiraki T., Suzuki S., M., Waki K., Watahiki A., Okamura-Oho Y., Suzuki H., Kawai J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q9DCI3; Q99J63; Q9D356; 15-NOV-2002, integrated into UniProtKB/Swiss-Prot. 15-NOV-2002, equence version 2. 07-FBB-2006, entry version 29. MLN64 N-terminal domain homolog (STARD3 N-terminal-like protein). Name=Stard3nl; Synonyms=Mentho;
                                                                                                                                                                                                                                                                                                                                ;;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA] (ISOFORMS 1 AND 2).
                                                                                                                                                                                                                                                       66.7%; Score 6; DB 1; Length 234;
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143 Potential.
150 Extracellular (Potential).
171 Potential.
234 Cytoplasmic (Potential).
218 MENTAL.
26655 MW; AFB7DAE381983FB0 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT; 235 AA.
                                                                                                                                                                                                                                                                                    Pred. No. 49;
0; Mismatches
                                                                                                                                                                                                                                                                                    Local Similarity 100.0%;
tes 6; Conservative 0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus (Mouse)
       123
144
151
172
48
234 AA;
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                                                                                                       TOPO DOM
DOMAIN
SEQUENCE
                                            TOPO DOM
TRANSMEM
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           TRANSMEM
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                                                                                                                                                                                                                                                                                           Best Loc
Matches
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RESULT 4
                                                   TISSUE-Mammary gland;

MEDLINE-22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

A Strausberg R.L.; Feingold E.A.; Grouse L.H.; Derge J.G.;

A Strausberg R.L.; Feingold E.A.; Grouse L.H.; Derge J.G.;

A Altschul S.F.; Zeeberg B., Buetow K.H.; Schaefer C.F.; Bhat N.K.;

A Hopkins R.F.; Jordan H.; Moore T., Max S.I.; Wang J.; Haith F.;

A Diatchenko L., Marusina K., Farmer A.A.; Rubin G.M.; Hong L.;

A Diatchenko L., Marusina K., Farmer A.A.; Rubin G.M.; Hong L.;

A Diatchenko L., Marusina K., Farmer A.A.; Rubin G.M.; Hong L.;

A Stapleton M.J.; Usdin T.B.; Toshiyuki S.; Carninci P.; Prange C.;

A Raha S.A.; Loquellano N.A.; Peters G.J.; Abramson R.D.; Mullahy S.J.;

A Norley K.C.; Hale S.; Garcia A.M.; Gay L.J.; Hulyk S.W.;

A Villalon D.K.; Muxry D.M.; Sodergran R.J.; Lu X.; Gibbs R.A.;

A Nillalon D.K.; Muxry D.M.; Sodergran R.J.; Lu X.; Gibs R.A.;

A Nillalon D.K.; Muxry D.M.; Sodergran R.J.; Du X.; Gibs R.A.;

A Nillalon D.K.; Muxodhan J.W.; Oderen E.D.; Dickson M.C.;

A Bakesley R.W.; Touchman J.W.; Ofren E.D.; Myers R.M.;

B Rodriguez A.C.; Grimwood J.; Gromutz J.; Myers R.M.;

B Butterfield Y.S.N.; Krzywinski M.I.; Skalska U.; Smailus D.E.;

A Schnerch A., Schein J.B., Jones S.J.M.; Marra M.A.;

B Rodriguez A.C.; Grimwood J.; Schmutz J.; Myers R.M.;

B Rodriguez A.C.; Grimwood J.; Schmutz J.; Myers R.M.;

B Rodriguez A.C.; Grimwood J.; Schmutz J.; Myers R.M.;

B Rodriguez A.C.; Grimwood J.; Skalska U.; Smailus D.E.;

B Rochischi J. Acad. Sci. U.S.A. 99:16899-16903(2002).

C I- SUBCELLUAR LOCATION: Integral membrane protein. Late endosomal membrane protein (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms Distributed under the Creative Commons Attribution-NoDerivs License
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEEEAEEKQESEKPLLEL -> RNSSAFRMGIQKSSQPSGG
                                                                                                                                                                                                                                                                                                                                                                                                                   Note=No experimental confirmation available;
-!- SIMILARITY: Contains 1 MENTAL domain.
-!- CAUTION: Ref.1 (BAB31166) sequence differs from that shown due to a frameshift in position 31.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAGTRARFVPKASSCREGRPGLPMWLQ (in isoform
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MLN64 N-terminal domain homolog. /FIId=PRO_0000096420.
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QL -> HS (in Ref. 1; BAB22337).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Extracellular (Potential).
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F251725390CB1503 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Extracellular (Potential)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cytoplasmic (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cytoplasmic (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Cytoplasmic (Potential).
          NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA] (ISOFORM 1)
                                                                                                                                                                                                                                                                                                                                                      Event=Alternative splicing; Named isoforms=2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MGI; MGI:1923455; Stard3nl.
Alternative splicing; Membrane; Transmembrane.
CHAIN 1 235 MLN64 N-terminal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; AK002760; BAB22337.1; -; MRNA.
EMBL; AK018331; BAB31166.1; ALT FRAME; MRNA.
EMBL; BC003334; AAH03334.1; -; MRNA.
Ensembl; ENSMUSG00000003062; Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    66.7%; Score 6; DB 1
100.0%; Pred. No. 49;
ive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                         IsoId=Q9DCI3-2; Sequence=VSP_003909;
                                                                                                                                                                                                                                                                                                                                                                              IsoId=09DCI3-1; Sequence=Displayed;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Potential.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   33
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74
97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         235 AA;
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75
98
1119
1123
1144
1172
148
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CONFLICT
SEQUENCE
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RA Carninci P., Kasukawa T., Katayama S., Gough J., Frith M.C., Maeda N., Ra Gyama R., Rasukawa T., Katukawa E., Katayama S., Gough J., Frith M.C., Maeda N., Oyama R., Rarukawa T., Katayama S., Gough J., Frith M.C., Maeda N., Bajic V.B., Barier S.E., Batalov S., Forrest A.R., Zavolan M., Bayic V.B., Milming U.G., Addinis V., Allen J.E.,

RA Ambesi-Impionato A., Apweller R., Aturaliya R.N., Bailay T.L.,

Baneal M., Baxter L., Beisel K.W., Berseno T., Bono H., Chalk A.M.,

RA Crowe M.L., Dalla E., Dalrymple B.P., de Bono B., Della Gatta G.,

Crowe M.L., Dalla E., Dalrymple B.P., de Bono B., Della Gatta G.,

RA Georgii-Hemming P., Cingerrom P., Fagiolini M., Faulkner G.,

RA Georgii-Hemming P., Cingerson P., Fagiolini M., Faulkner G.,

RA Hill D., Huminiecki L., Iacono M., Ikeo K., Iwama A., Ishikawa T.,

Auth M., Kanapin A., Katoh M., Kawasawa Y., Kelso J., Kitemura H.,

Auth M., Kanapin A., Katoh M., Kawasawa Y., Kelso J., Kitemura H.,

Authan H., Kollias G., Krishnan S.P., Kruger A., Wummerfeld S.K.,

Kurochkin I.V., Lareau L.F., Lazarevic D., Lipovich L., Liu J.,

Liuni S., Mathauzawa S., Miki H., Mignone F., Myake S., Morris K.,

Mottagui-Tabar S., Mulder N., Nakano N., Nakauchi H., Ng P.,

RA Matsukawa S., Ranga B.D., Ranga B.D., Sinclair B.,

Rotazaki Y., Orlando V., Pang K.C., Pavan W.J., Pavesi G.,

Rangon R., Nishiguchi S., Nishikawa S., Nori F., Ohara O.,

Schonbach C., Sekiguchi K., Samdelin A., Schneider C.,

Schonbach C., Sekiguchi K., Samdelin A., Schneider C.,

Schonbach C., Sekiguchi K., Sample C.A., Seno S., Sessa L., Takenaka Y.,

Tammoja K., Tan S.L., Tang S., Taylor M.S., Tegner J., Teichmann S.A.,

Tammoja K., Tan S.L., Tang S., Taylor M.S., Tegner J., Teichmann S.A.,

Huda H.R., van Nimwegen E., Velama M., Suzuki M., Akakan K., Ninomish M., Kato T., Kawashima T., Salawi D., Tokada M., Suzuki M., Akakan K., Ninomish M., Kato T., Kawashima T., Salawi J.,

Rawashima T., Sakada M., Kolom M., Suzuki M., Akakan K., Ninomish J.,

Rawashima T., Sokida M., Kato T., Kawashima T.,

Rawashizaki Y., Shim
                                                                                                                        11-0CT-2005, sequence version 1.
07-FBB-2006, entry version 5.
Bone marrow macrophage cDNA, RIKEN full-length enriched library,
clone:1830067H03 product:STARD3 N-terminal like, full insert sequence.
Name=Stard3nl;
                                                                                                                                                                                                                                                                                                                                                         Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Buarchontoglires; Glires; Rodentia; Sciurognathi;
Muroidea; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRAIN=CSTBL/66; TISSUE=Bone marrow; MEDLINE=99279253; PubMed=10349636; DOI=10.1016/S0076-6879(99)03004-9; Carninci P., Hayashizaki Y.; Hidipt-efficiency full-length cDNA cloning."; Methods Enzymol. 303:19-44(1999).
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STRAIN=CS7BL/60; TISSUE=Bone marrow;
STRAIN=CS7BL/60; TISSUE=Bone marrow;
NUMBed=16141073; DOI=10.1126/science.1112009;
RIKEN Genome Exploration Research Group, and Genome Science Group (Genome Network Core Team) and the FANTOM Consortium;
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                                                                                      11-OCT-2005, integrated into UniProtKB/TrEMBL
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PubMed=16141072; DOI=10.1126/Science.1112014;
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PRELIMINARY;
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Local Similarity

Best Loca Matches

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1 IETWFL 6

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KRAIN-CSTBL/643; TISSUE-Bone Marrow;

A Arawa T., Hara A., Fukunishi Y., Kohono H., Kankwa T., Yamanaka I.,

A Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,

Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,

Radota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,

Radota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,

Ruchl P., Lewis S., Marsuo Y., Nikaido I., Pesole G., Quackenbush J.,

Saki K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,

Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,

Brownstein M.J., Bult C., Fletcher C., Fuljita M., Gariboldi M.,

Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,

Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,

Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,

Winnhaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,

Manahay-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRAIN=C57BL/6J; TISSUE=Bone marrow; MEDLINE=20499374; PubMed=11042159; DOI=10.1101/gr.145100; Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata K., Itoh M., Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y., Huramatsu M., Hayashizaki Y., Shibata K., Itoh M., "Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes."; Genome Res. 10:1617-1630(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUCLEOTIDE SEQUENCE.
STRAIN=CS7BL/6J; TISSUE=Bone marrow;
MEDLINE=20530913; PubMed=11076861; DOI=10.1101/gr.152600;
Shibata K., Itoh M., Alzawa K., Nagaoka S., Sasaki N., Carninci P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Functional annotation of a full-length mouse cDNA collection.";
                                                                                            STRAIN=C57BL/6J; TISSUE=Bone marrow;
MEDLINE=22354683; PubMed=12466851; DOI=10.1038/nature01266;
  "Antisense Transcription in the Mammalian Transcriptome."; science 309:1564-1566 (2005).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   full-length cDNAs.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nature 420:563-573(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nature 409:685-690(2001).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bone marrow macrophage cDNA, RIKEN full-length enriched library, clone:1830047P07 product:STARD3 N-terminal like, full insert sequence.
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Mammalia; Butheria; Buarchontoglires; Glires; Rodentia; Sciurognathi;
Muroidea; Muridae; Murinae; Mus.
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MEDLINE=99279253; PubMed=10349636; DOI=10.1016/S0076-6879(99)03004-9;
                                                                                                                                                                                                                                                                             Arakawa T., Carninci P., Fukuda S., Hachizume W., Hayashida K., Arakawa T., Carninci P., Fukuda S., Hachizume W., Hayashida K., Hori F., Iida J., Imamura K., Imotani K., Itch M., Kanagawa S., Kawai J., Kojima M., Konno H., Murata M., Nakamura M., Ninomiya N., Nishiyori H., Nomura K., Ohno M., Sakazume N., Sano H., Sasaki D., Shibata K., Shiraki T., Tagami M., Tagami Y., Waki K., Watahiki A., Submitted (MAR-2004) to the EMBL/GenBank/DDBJ databases.
Konno H., Akiyama J., Nishi K., Kitsunai T., Tashiro H., Itoh M., Sumi N., Ishii Y., Nakamura S., Hazama M., Nishine T., Harada A., Yamamoto R., Matsumoto H., Sakaguchi S., Ikegami T., Kashiwagi K., Fujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M., Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J. Okazaki Y., Muramatsu M., Inoue Y., Kira A., Hayahizaki Y.; sequencing pipeline with 384 multicapillary sequencer.";
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STRAIN=CS7BL/6J; TISSUE=Bone marrow;
PubMed=16141072; DOI=10.1126/8cience.1112014;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Carninci P., Hayashizaki Y.;
"High-efficiency full-length cDNA cloning.";
Methods Enzymol. 303:19-44(1999).
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100.0%; Pred. No. 49;
ive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; AK152378; BAE31167.1; -; mRNA, MGI; MGI:1923455; Stard3n1. SEQUENCE 235 AA; 26777 MW; AD5514
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Best Local Similarity 100.
Matches 6; Conservative
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Q3U8Q7;
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Hill D., Huminiecki L., Iacono M., Ikeo K., Iwama A., Ishikawa T.,

A Jak M., Kanapin A., Katoh M., Kawasawa Y., Kalso J., Kitamura H.,

Kitano H., Kanapin A., Katoh M., Kawasawa Y., Kummerfeld S.K.,

Kurochkin I.V., Lareau L.F., Lazarevic D., Lipovich L., Liu J.,

Liuni S., McWilliam S., Madan Babu M., Marchionni L.,

Matsuda H., Matsuzawa S., Miki H., Mignone F., Miyake S., Morris K.,

Mottagui-Tabar S., Miki H., Mignone F., Miyake S., Morris K.,

Motsadki Y., Orlando V., Pang K.C., Pavan W.J., Pavesi G., Pesole G.,

Petrovsky N., Piazza S., Nishikawa S., Nori F., Ohara O.,

Na Natsuda H., Salperg S.L., Sandelin A., Scheider C.,

Rost B., Kuan Y., Salzberg S.L., Sandelin A., Scheider C.,

Schonbach C., Sekiguchi K., Semje C.A., Seno S., Sessa L., Sheng Y.,

Sperling S., Stupka E., Sugiura K., Sulran R., Takenaka Y., Taki K.,

Tammoja K., Tan S.L., Tang S., Taylor M.S., Tegner J., Kachmann S.A.,

A Tammoja K., Tang S., Tang S., Taylor M.S., Tegner J., Hide W., Bult C.,

A Timmond S.M., Taeadale R.D., Liu E.T., Burusic V., Ouackenbush J.,

A Timmond S.M., Taeadale R.D., Liu E.T., Burusic V., Ouackenbush J.,

Rhiberedt C., Mattick J.S., Hume D.A., Kai C., Sasaki D., Tomaru Y.,

A Tida J., Immura M., Kondo S., Kono H., Nakano K., Ninomiya N.,

A Tida J., Immura M., Kondo S., Kawashima T., Kayasashima T., Kojima Plessy C., Shibata K., Shiraki T., Suzuki S.,

Pagami M., Waki K., Watahiki A., Okamura-Oho Y., Suzuki J., sirney E., Hayashizaki Y.; Analysis of the mouse transcriptome based on functional annotation of STRAIN=C57BL/67; TISSUE=Bone marrow; PubMed=16141073; DOI=10.1126/science.1112009; RIKEN Genome Exploration Research Group, and Genome Science Group (Genome Network Core Team) and the FANTOM Consortium; "Ahrisense Transcription in the Mammalian Transcriptome."; Science 109:1564-1566(2005). "The transcriptional landscape of the mammalian genome."; Science 309:1559-1563 (2005). NUCLEOTIDE SEQUENCE NUCLEOTIDE SEQUENCE Hayashizaki Y.;

Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,
Alzawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
Saito T., Okazaki Y., Gojobori T., Shono H., Kasukawa T., Saito R.,
Radota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
Pelschmann W., Gasterland T., Gissi C., King B., Kochiwa H.,
Rahai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
Rownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
Gustinoich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
Austinoich S., Hill D., Hofmann W., Mazzarelli J., Mombaetts P.,
Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
Suzuki H., Toyo-oka K., Wang K.H., Weitz C., Whittaker C., Wilming L.,
Hyashizaki Y.,
Hyashizaki Y., Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms Distributed under the Creative Commons Attribution-NoDerivs License STRAIN=C57BL/6J; TISSUE=Bone marrow, MEDILIBE20499374; PUBMed=11042199; DOI=10.1101/gr.145100; MEDILIBE20499374; PUBMed=11042199; DOI=10.101/gr.145100; Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata K., Itoh M., Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y.; Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes."; Genome Res. 10:1617-1630(2000). Gaps Arakawa T., Carninci P., Fukuda S., Hashizume W., Hayashida K., Arakawa T., Carninci P., Fukuda S., Hashizume W., Hayashida K., Hori F., Iida J., Imamura K., Imotani K., Itoh M., Kanagawa S., Kawai J., Kojima M., Konno H., Murata M., Nakamura M., Ninomiya N., Nishiyori H., Nomura K., Ohno M., Sakazume N., Sano H., Sasaki D., Shibata K., Shiraki T., Tagami M., Tagami Y., Waki K., Watahiki A., Submitted (MAR-2004) to the EMBL/GenBank/DDBJ databases. MEDLINE=20530913; PubMed=11076861; DOI=10.1101/gr.152600; Shibata K., Ttoh M., Alzawa K., Nagaoka S., Sasaki N., Carninci P., Shibata Y., Ttoh M., Alzawa K., Nagaoka S., Sasaki N., Carninci P., Sumi N., Ishii Y., Nakamura S., Hazama M., Nishine T., Tashiro H., Itoh M., Yamamoco R., Matsumoto H., Sakaguchi S., Ikegami T., Kashiwagi K., Pujiwake S., Inoue K., Togawa M., Olara E., Watshiwagi K., Pujiwake S., Inoue K., Togawa M., Olara E., Watshiwaji M., Okazaki Y., Muramatsu M., Inoue Y., Kira A., Hayashizaki Y.; "RIKEN integrated sequence analysis (RISA) system-384-format Genome Res. 10:1757-1771(2000). Functional annotation of a full-length mouse cDNA collection."; ; 0 Length 235; Indels 235 AA; 26811 MW; F251725390CB1503 CRC64; 66.7%; Score 6; DB 2; 100.0%; Pred. No. 49; 235 AA. 100.0%; Pred. ... EMBL; AK152116; BAE30960.1; -; mRNA. MGI; MGI:1923455; Stard3nl. PRT; PRELIMINARY; Nature 409:685-690(2001). 6; Conservative NUCLEOTIDE SEQUENCE. NUCLEOTIDE SEQUENCE Query Match Best Local Similarity SEQUENCE 166 IETWFL 171 1 IETWFL 6 QSU205_RAT NUCLEOTIDE SEQUENCE RAT Matches RESULT 6 QSU205 RA' ID QSU2 ò

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STRAIN=C57BL/6J; TISSUE=Bone marrow; MEDLINE=21085660; PubMed=11217851; DOI=10.1038/35055500;

NUCLEOTIDE SEQUENCE.

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Query Match
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Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
Altachul S.F., Zeeberg B. Buetow K.H., Schaefer C.R., Bhat N.K.,
Altschul S.F., Zeeberg B. Buetow K.H., Schaefer C.F., Bhat N.K.,
Altschul S.F., Zeeberg B. Buetow K.H., Schaefer C.F., Bhat N.K.,
Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsidh F.,
Datchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
Stapleton M., Soares M.B., Bonaldo M.F., Carninci P., Frange C.,
Brownstein M.J., Usdin T.B., Tochhyuki S., Carninci P., Frange C.,
Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunarate P.H.,
Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
Allalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
Multing M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
Butterfield Y.S.N., Krzywinski M.I., Skaleka U., Smailus D.E.,
Butterfield Y.S.N., Krzywinski M.I., Skaleka U., Smailus D.E.,
Butterfield Y.S.N., Krzywinski M.I., Skaleka U., Smailus D.E.,
Butterfield A., Schein J.E., Jones S.J.M., Marra M.A.;
Butterfield A., Schein J.E., Jones S.J.M., Marra M.A.;
Butterfield A., Schein J.E., Jones S.J.M., Marra M.A.;
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                                                                                                                                                                                    Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
Muroidea; Muridae; Murinae; Rattus.
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Hypocreomycetidae; Hypocreales; Nectriaceae; Gibberella.
NCBI_TaxID=5518;
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Submitted (NOV-2004) to the EMBL/GenBank/DDBJ databases.
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Ensembl; ENSRNGG0000012126; Rattus norvegicus.
SEQUENCE 235 AA; 26719 MW; 6238B671397EA775 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      and mouse cDNA sequences.";
Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002)
                      07-DEC-2004, integrated into UniprotKB/TrEMBL.
07-DEC-2004, sequence version 1.
07-FEB-2006, entry version 10.
87-ARD33 N-terminal like (Predicted).
Name=Stard3n1;
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16-AUG-2005, integrated into UniProtKB/TrEMBL.
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100.0%; Pred. No. 49;
iive 0; Mismatches
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07-FBB-2006, entry version 4.
Hypothetical protein.
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Birren B.W., Nusbaum C., Abouelleil A., Allen N., Anderson S., Arachchi H.M., Barna N., Bastien V., Bloom T., Boguslavkly L., Buchchi H.M., Barna N., Calvo S.E., Camarata J., Chang J., Choepel Y., Collymore A., Cook A., Cooke J., Corum B., Dedrellano K., Diaz J.S., Dodley K., Dozris L., Elkins T., Engels R., Brickson J., Faro S., Gnerre S., Graham L., Grand-Pierre N., Affez N., Hagoslan D., Hagos B., Hall J., Horton L., Hulme W., Andreas J., Kells C., Landers T., Levine K., Lindblad-Pierre N., Manning J., Mathews C., Mauceli E., Macdanald P., Major J., Manning J., Mathews C., Mauceli E., McCarthy M., Meldrim J., Manning J., Mathews C., Mauceli E., McCarthy M., Meldrim J., Nielsen C.B., Norbu C., O'Connor T. O'Donnell P., O'Neil D., Oliver J., Peterson K., Phunkhang P., Pierre N., Purcell S., Rachupka A., Ramasamy U., Raymond C., Retta R., Rise C., Mairnoy P., Romov P., Romit C., Spencer B., Schubback R., Seaman S., Severy P., Smirnov S., Smith C., Spencer B., Stange-Thoman N., Stojanovic N., Stubbs M., Talamas J., Tesfaye S., Theodore J., Topham K., Travers M., Vassliev H., Venkataraman V.S., Viel R., Vo A., Wang S., Wilson B., Minder E.S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms Distributed under the Creative Commons Attribution-NoDerivs License
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Tsutsumi S., Aburatani H., Asai K., Akiyama Y.;
"Genome-wide discovery and analysis of human seven transmembrane helix
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Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini, Hominidae,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Fusarium graminearum genome sequence.";
Submitted (FEB-2004) to the EMBL/GenBank/DDBJ databases.
-1- CAUTION: The sequence shown here is derived from an EMBL/GenBank/DDBJ whole genome shotgun (WGS) entry which is
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Predriksson R., Lagerstroem M.C., Hoeglund P.J., Schioeth H.B.;
"Novel human G protein-coupled receptors with long N-terminals
containing GPS domains and Ser/Thr-rich regions.";
FEBS Lett. 531:407-414(2002).
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Homo sapiens (Human).
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Complete protecme; Hypothetical protein.
SEQUENCE 405 AA; 43960 MW; 5E275BB334F6AE3E CRC64;
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R EMBL; AX36217; AAQ88539.1; -; mRNA.

R EMBL; AX35214; AAQ88539.1; -; mRNA.

R EMBL; AX35214; AAQ88539.1; -; mRNA.

R EMBL; AX25511; AAQ88530.1; -; mRNA.

R EMBL; AX25511; AAQ8553.1; -; mRNA.

R ENSCHOOL SECONDISSON CONTINENTY.

R ENSCHOOL SECONDISSON CONTINENTY.

R GO; GO:0016021; C:integral to membrane; TAS.

GO; GO:00186; P:G-protein coupled receptor activity; TAS.

R GO; GO:000186; P:G-protein coupled receptor protein signalin. .; TAS.

R InterPro; IPR00187; hormone rcpt.

R InterPro; IPR00187; hormone rcpt.

R InterPro; IPR00187; hormone rcpt.

R Pfam; PF01825; GPS; 1.

R Pfam; PF01825; GPS; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                NUCLECTIDE SEQUENCE [LARGE SCALE GENOMIC DNA] OF 563-1079.
MEDILTB=22040266; Pubmed=12046478; DOI=10.1016/$0014-5793(02)02775-8;
TAkeda S., Kadowaki S., Haga T., Takaesu H., Mitaku S.;
"Identification of G protein-coupled receptor genes from the human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -i- SIMILARITY: Belongs to the G-protein coupled receptor 2 family. IN-TM7 subfamily.
-i- SIMILARITY: Contains 1 GPS domain.
-i- CAUTION: Ref. 2 sequence differs from that shown due to erroneous gene model prediction.
                                                                                                                                                                                                                                                                                                         effort to identify novel human secreted and transmembrane proteins: bioinformatics assessment."; Genome Res. 13:2265-2270(2003).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IsoId=Q81ZF5-2; Sequence=VSP 012815, VSP 012816, VSP 012817; Note=Ref.3 (AAQ88581) sequence is in conflict in position:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MUCLEOTIDE SEQUENCE [LARGE SCALE MRNA] OF 797-942.
MEDLINE=22584407, PubMed=12679517, DOI=10.1073/pnas.0230374100;
MEDLINE=22584407, PubMed=12679517, DOI=10.1073/pnas.0230374100;
Mostrud Mr., Brown A., Rodriguez S.S., Weller J.R., Wright A.C.,
Bergmann J.E., Galtanaris G.A.;
"The G protein-coupled receptor repertoires of human and mouse.",
Proc. Natl. Acad. Sci. U.S.A. 100:4903-4908(2003).
-!- FUNCTION: Orphan receptor.
-!- FUNCTION: Orphan receptor.
-!- SUBCELLULAR LOCATION: Membrane; multi-pass membrane protein.
[3]
NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA] (ISOFORM 2), AND VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROSITE; PS00649; G_PROTEIN_RECEP_F2_1; FALSE_NEG. PROSITE; PS00650; G_PROTEIN_RECEP_F2_2; 1. PROSITE; PS5027; G_PROTEIN_RECEP_F2_3; 1. PROSITE; PS50261; G_PROTEIN_RECEP_F2_4; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Event=Alternative splicing; Named isoforms=2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IsoId=Q8IZF5-1; Sequence=Displayed;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRINTS; PR00249; GPCRSECRETIN.
SMART; SM00303; GPS; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          genome sequence.";
FEBS Lett. 520:97-101(2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    868:K->N;
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Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MVCSAAPLLLLATTLPLLGSPVAQASQPVSETGVRFREGLQ
ROWGELLGROKAWWESTDRPPEACET PLSSSFGRWPKGQT
MWAQTSTLTLTEEEL -> MTTRKLSAATPGYKAVTHK
HHTGWARMAKTGLPEK (in isoform 2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                          Probable G-protein coupled receptor 113.
                                   Membrane; Polymorphism; Receptor; Signal; Transducer; Transmembrane.
SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /FTId=VSP 012816.
VSCCLQILSCASKSMSEGIPWPSSEDMGTARS ->
CILEHSKGGSDTARKTDASE (in isoform 2).
                                                                                                                                                                                                                                                                                                                                                                                                              d (GlcNAc. . .) (Potential).
d (GlcNAc. . .) (Potential).
d (GlcNAc. . .) (Potential).
d (GlcNAc. . .) (Potential).
d (GlcNAc. . .) (Potential).
GPS; 1.
ing; G-protein coupled receptor; Glycoprotein;
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404 404 A - Y (in BASNP:2052937).
7FTIG=VAR 034475.
348 348 A - V (in Ref. 3; AAQ88539).
599 599 H - Y (in Ref. 3; AAQ88539).
886 886 M - Y (in Ref. 3; AAQ88531).
1079 AA; 116341 MW; AI8CAIS6P4DBB9C CRC64;
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Swearengen S., Cordes M., Cotton M.;
The sequence of Homo sapiens BAC clone RP11-499P9.";
Submitted (SEP-1999) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                        1 (Potential).
2 (Potential).
2 (Potential).
Extracellular (Potential).
3 (Potential).
Cytoplasmic (Potential).
4 (Potential).
5 (Potential).
5 (Potential).
                                                                                                                                                                                                                                                                                                                  6 (Potential).
Extracellular (Potential)
                                                                                         /FTId=PRO 0000012893.
Extracellular (Potential)
                                                                                                                                                                                                                                                                                                                                                                             Cytoplasmic (Potential).
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Pred. No. 1.5e+02;
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N-linked (GlCNAC. .
N-linked (GlCNAC. .
N-linked (GlCNAC. .
N-linked (GlCNAC. .
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100.0%;
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Q53TAS;
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                                                                                                                                                                    1079
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                   Alternative splicing;
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Predicted protein.
ORFNames=NCU08869.1;
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                                                                           Query Match
Best Local Similarity
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Best Local Similarity
Matches 6; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=5141;
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Q75795;
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Q6CGE3_YARLI
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Eukaryota; Fungi; Ascomycota; Pezizomycotina; Sordariomycetes;
Sordariomycetidae; Sordariales; Sordariaceae; Neurospora.
                                                                                                                                                                                                                                                                                                                                                                                                                       GO:0016020; C:membrane; IEA.
GO:0004930; F:G-protein coupled receptor activity; IEA.
GO:0007218; P:neuropeptide signaling pathway; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           66.7%; Score 6; DB 2; Length 1079; 100.0%; Pred. No. 1.5e+02; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hypothetical protein.
SEQUENCE 1079 AA; 116341 MW; A18CA158F4DDBB9C CRC64;
                                              Waterston R.H.;
Submitted (SEP-1999) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                              Submitted (JAN-2002) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                           Submitted (APR-2005) to the EMBL/GenBank/DDBJ databases.
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Submitted (JAN-2002) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PROSITE; PS01186; EGF 2; UNKNOWN 1.
PROSITE; PS00650; G PROTEIN RECEP F2 2; UNKNOWN 1.
PROSITE; PS50227; G PROTEIN RECEP F2 3; 1.
PROSITE; PS50221; GPS07EIN RECEP F2 4; 1.
PROSITE; PS50221; GPS; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-MAR 2002, integrated into UniProtKB/TrEMBL 01-MAR-2002, sequence version 1. 07-FB-2006, entry version 9. Hypochetical protein 5EG 080.
                                                                                                                                                                                                                                                                                                                                                                           EMBL; AC010896; AAY14645.1; -; Genomic DNA.
Ensembl; ENSG0000173567; Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QBXORO NEUCR PRELIMINARY; PRT; 1093 AA.
QBXORO;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro; IPR013032; EGF like reg.
InterPro; IPR01032; GPF like reg.
InterPro; IPR010893; GPCR secretin.
InterPro; IPR010899; hormone rcpt.
InterPro; IPR000203; PKD_cyg_rich.
Pfam; PF001025; GPS; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRINTS; PR00249; GPCRSECRETIN.
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Matches 6; Conservative
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[2]
NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                            NUCLEOTIDE SEQUENCE.
                                                                                            [3]
NUCLEOTIDE SEQUENCE
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                                                                                                                                             Waterston R.
                                                                                                                                                                                                                                         Wilson R.K.;
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08X0R0 NEU
10 08X0R
AC 08X0R
DT 01-MA
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DE HYPOT
GN Name=
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Calvo S. E., Calvo S. E., Gorkovich K. A., Salker B.U., Read N.D., Calvo S. E., Galvo S. E., Galvo S. E., Galvo S. E., Galvo S. E., Galvo S. E., Galvo S. E., Galvo S. E., Galvo S. E., Galvo S. Purcell S., Rehman B., Bline D., Islandie P., Bell-Pedersen D., Nelson M. A., Qui D., Ianakiev P., Bell-Pedersen D., Nelson M. A., Braun B.L., Rener-Washburne M., Selitrennikoff C. P., Kinsey J. A., Braun B.L., Zelter A., Schulte U., Kothe G.O., Jedd G., Mawes H.-W., Staben C., Marcotte E., Greenberg D., Roy A., Foley K., Naylor J., Marcotte E., Greenberg D., Roy A., Foley K., Maylor J., Ramwysselis M., Maucelli E., Bielke C., Rudd S., Frishman D., Krystofova S., Ramansen C., Metzenberg R.L., Perkins D.D., Krystofova S., Macino G., Catcheside D.E.A., Li W., Pratt R.J., Osmani S.A., Voelker R., Yarden O., Plamann M., Seiler S., Dunlap J.C., Radford A., Aramayo R., Paulsen I., Sache M.S., Lander E.S., Nusbaum C., Birren B.W.; Paulsen I., Sache M.S., Lander E.S., Nusbaum C., Birren B.W.; Nature 422:859-868(2003).
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                                                                                                                                                                                     Gaps
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Eukaryota; Fungi; Ascomycota; Pezizomycotina; Sordariomycetes;
Sordariomycetidae; Sordariales; Sordariaceae; Neurospora.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN=74-0R23-1A / FGSC 987;
MEDLINE=22598136; PubMed=12712197; DOI=10.1038/nature01554
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Hypothetical protein.
SEQUENCE 1093 AA; 120695 MW; 9F6BF07A8AD661BD CRC64;
                                                                                                                                                                                     0; Indels
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SEQUENCE 1117 AA; 123343 MW; 19B8B0ECD607752D CRC64;
                                                                                                             Score 6; DB 2; Le;
Pred. No. 1.6e+02;
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OGCGE3, YARLI PRELIMINARY; PRT; 29 AA.

OGCGE3,

16-AUG-2004, integrated into UniProtKB/TrEMBL.

10-AUG-2004, sequence version 1.

07-FEB-2006, entry version 12.
                                                                               66.7%; Scor.
100.0%; Pred. No. ...
0; Mismatches
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07-FEB-2006, entry version 9.
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Indels

100.0%; Pred. No. 3.2e+02; ive 0; Mismatches 0;

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Best Local Similarity
Matches 5; Conserv
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                                                                                                                TRAIN-CLIB 122 / E 150;

The pubmed-1522592; DOI=10.1038/nature02579;

Pubmed-1522592; DOI=10.1038/nature02579;

Dujon B., Sherman D., Fischer G., Durrens P., Casaregola S.,

Lafontaine I., de Montigny J., Marck C., Neuveglise C., Talla E.,

Goffard N., Frangul L., Aigle M., Anthouard V., Babour A., Barbe V.,

Barnay S., Blanchin S., Beckerich J.-M., Beyne E., Bleykasten C.,

Boisrame A., Boyer J., Cattolico L., Confanioleri F., de Daruar A.,

Boisrame A., Boyer J., Cattolico L., Confanioleri F., de Daruar A.,

Hantraye F., Hennequin C., Jauniaux N., Joyet P., Kachouri R.,

Kerrest A., Koszul R., Lemaire M., Lesur I., Ma L., Mullor H.,

Nicaud J.-M., Nikolski M., Oztas S., Ozier-Kalogeropoulos O.,

Nicaud J.-M., Nikolski M., Oztas S., Ozier-Kalogeropoulos O.,

Swennen D., Tekaia F., Wesolowski-Louvel M., Westhof E., Wirth B.,

Zeniou-Meyer M., Zivanovic Y., Bolotin-Fukuhara M., Thierry A.,

Bouchier C., Caudich J.-L.;

Mincker P., Souciet J.-L.;

Nature 430:35-44(2004).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms Distributed under the Creative Commons Attribution-NoDerivs License
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STRAIN-VPI-5482 / AFCC 29148;

MEDLINE-22550858; PubMed=12663928; DOI=10.1126/science.1080029;

Xu J., Bjursell M.K., Himrod J., Deng S., Carmichael L.K.,

Chiang H.C., Hooper L.V., Gordon J.I.;

"A genomic view of the human-Bacteroides thetaiotaomicron symbiosis.";

Science 299:2074-2076(2003).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
   OrderedLocusNames=YALIOA20042g;
Yarrowia lipolytica (Candida lipolytica).
Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes;
Saccharomycetales; Dipodascaceae; Yarrowia.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bacteria; Bacteroidetes; Bacteroidetes (class); Bacteroidales; Bacteroidaceae; Bacteroides.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   55.6%; Score 5; DB 2; Length 29; 100.0%; Pred. No. 1.5e+02; tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Complete proteome, Hypothetical protein. SEQUENCE 77 AA, 9164 MW; 115052AB1896BA18 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       29 AA; 3169 MW; 5FB2DCF7AA4626ED CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-JUN-2003, integrated into UniProtKB/TrEMBL.
01-JUN-2003, sequence version 1.
07-FEB-2006, entry version 9.
07-PED-2006, entry version 9.
OrderedLocusNames=BT3218; ORFNames=BT_3218;
                                                                                                    NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         77 AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; CR382127; CAG84207.1; -; Genomic_DNA.
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Best Local Similarity
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SEQUENCE 29 AA;
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                                                                     NCBI_TaxID=4952;
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Score 5; DB 2; Length 77;

55.6%;

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Distributed under the Creative Commons Attribution-Noberivs License
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Archaea, Buryarchaeota, Methanomicrobia, Methanosarcinales;
Methanosarcinaceae, Methanosarcina.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              55.6%; Score 5; DB 2; Length 79; 100.0%; Pred. No. 3.2e+02; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                    Lactobacillus delbrueckii subsp. lactis.
Bacteria, Firmicutes, Lactobacillales, Lactobacillaceae,
Lactobacillus.
                                                                                                                                                                                                                                                                                                                                                                                                                   Langenheim J.F., Ulrich R.L.;
Submitted (MAR-2002) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Submitted (AUG-2005) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         79 AA; 9042 MW; SE609E1F96CFFD10 CRC64;
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Complete proteome; Hypothetical protein.
SEQUENCE 80 AA; 9187 MW; 2DD0ED9A5E5C4CB3 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13-SEP-2005, integrated into UniProtKB/TrEMBL. 13-SEP-2005, sequence version 1. FBB-2006, entry version 4. Hypothetical protein.
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                                                                                                                                          071136_LACDL PRELIMINARY; PRT; 79 AA.
071136;
05-JUL-2004, integrated into UniProtKB/TrEMBL.
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                                                                                                                                                                                                         05-JUL-2004, sequence version 1. 07-FEB-2006, entry version 7. Sufi protein (Fragment).
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Q46APO;
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Best Local Similarity
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                                       66 FLRHP 70
                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=29397;
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5 FLRHP 9
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NUCLEOTIDE SEQUENCE.
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MEDLINE-21929760; PubMed=1193238; DOI=10.1101/gr.223902;
MEDLINE-21929760; PubMed=1193238; DOI=10.1101/gr.223902;
MEDLINE-21929760; PubMed=1193238; DOI=10.1101/gr.223902;
MEDLINE-21929760; PubMed=1193238; DOI=10.1101/gr.223902;
METATHUM W., Calvo S., Engels R., Smirnov S., Atnoor D., Brown A.,
Allen N., MayJor J., Stange-Thomann N., DeArellano K., Johnson R.,
Linton L., McEwan P., McKernan K., Talamas J., Tirrell A., Ye W.,
Linton L., McEwan P., McKernan K., Talamas J., Tirrell A., Ye W.,
Leigh J.A., Li W., Liu J., Mukhopadhyay B., Reeve J.N., Smith K.,
Springer T.A., Unayam L.A., White O., White R.H., de Macaric B.C.,
Perry J.G., Jarrell K.F., Jing H., Macario A.J.L., Paulsen I.T.,
Mctcalf W.W., Birren B.;
Mctcalf W.W., Lirnen B.;
The genome of Methanosarcina acetivorans reveals extensive metabolic
Genome Res. 12:512-542(2002).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORFNames=MA 4126,
Methanosarcīna acetivorans.
Archaea; Buryarchaeota; Methanomicrobia; Methanosarcinales;
Methanosarcinaceae; Methanosarcina.
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Pred. No. 3.3e+02;
Mismatches 0; Indels
55.6%; Score 5; DB 2; Length 80; 100.0%; Pred. No. 3.3e+02; ive 0; Mismatches 0; Indels
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SEQUENCE 80 AA; 9184 MW; DF02721324F5D173 CRC64;
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04-JAN-2005, sequence version 1.
07-FBB-2006, entry version 4.
Prothetical protein (Fragment).
Cenibacterium arsenoxidans.
Bacteria; Cenibacterium.
(1)
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100.0%; Pred. No. ...
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GenomeReviews; AE010299 GR; MA4126.
BioCyc; MACE188937:MA4126-MONOMER; -.
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                                                                                                                                                                                                                                                                                                                                                                               01-JUN-2002, sequence version 1.
07-MAR-2006, entry version 11.
Hypothetical protein.
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Pfam; PF07927; YcfA; 1.
                                                         Conservative
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Q8TIM1;
Query Match
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                                Carapito C., Muller D., Turlin E., Riegel P., Leize E., Danchin A., Van Dorsselaer A., Bertin P., Lett M.-C.; "Pleiotropic effect of arsenic stress on Cenibacterium arsenoxidans, metalloresistant beta-proteobacterium."; Submitted (AUG-2004) to the EMBL/GenBank/DDBJ databases.
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"Molecular phylogenetics and biogeography of galaxiid fishes
(Osteachthyes: Galaxiidae): dispersal, vicariance and the position of Lepidogalaxias salamandroides.";
Syst. Biol. 49:777-795(2000).
-!- FUNCTION: Component of the ubiquinol-cytochrome c reductase complex (complex III or cytochrome b-c1 complex), which is a respiratory chain that generates an electrochemical potential coupled to ATP synthesis (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUCLEOTIDE SEQUENCE.
MEDLINE=22111806; Pubmed=12116439; DOI=10.1080/106351500750049824;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Actinopterygii, Neopterygii, Teleostei, Euteleostei,
Protacanthopterygii, Salmoniformes, Retropinnidae, Retropinna.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -!- COFACTOR: Binds 2 heme groups noncovalently (By similarity). -!- SUBUNIT: The main subunits of complex b-c1 are: cytochrome b, cytochrome c1 and the Rieske protein (By similarity).
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GO:0016020; C:membrane; IEA.
GO:0005746; C:mitochondrial electron transport chain; IEA.
GO:0005739; C:mitochondrian; IEA.
GO:0005739; F:iron ion binding; IEA.
GO:0015787; F:metal ion binding; IEA.
GO:0016491; F:oxidoreductase activity; IEA.
GO:0016491; F:electron transport; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 87;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            87 AA; 9653 MW; EAAD40B00A2E3C86 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  55.6%; Score 5; DB 2; Ler 100.0%; Pred. No. 3.5e+02; tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-OCT-2000, integrated into UniProtKB/TrEMBL.
01-OCT-2000, sequence version 1.
07-FEB-2006, entry version 21.
                                                                                                                                                                                                                                                                                                                                                                                      EMBL; AY728027; AAV68356.1; -; Genomic_DNA.
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                                                                                                                                                                                                                                                                                                                                                                                                                           Hypothetical protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
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STRAIN=ULPAs1;
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Q9MISS_9TELE
Q9MISS;
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Sakaki Y., Hattori M., Omura S.; "Complete genome sequence and comparative analysis of the industrial microorganism Streptomyces avermitilis."; Nat. Biotechnol. 21:526-531(2003).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Interpro; IPR011991; Wing hlx DNA bd.
Complete proteome; DNA-binding; Hypothetical protein, Transcription;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gingeras T.R., Sciaky D., Gelinas R.E., Bing-Dong J., Yen C.E., Kelly M.M., Bullock P.A., Parsons B.L., O'Neill K.E., Roberts R.J.; J. Whulleotide sequences from the adenovirus-2 genome."; J. Biol. Chem. 257:13475-13491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7.115_ADE02 STANDARD; PRT; 115 AA.
P03250;
21-JUL-1986, integrated into UnibrotKB/Swiss-Prot.
21-JUL-1986, sequence version 1.
07-FEB-2006, entry version 21.
Hypothetical protein E-115.
Human adenovirus 2 (HAdV-2).
Viruses; deDNA viruses, no RNA stage; Adenoviridae; Mastadenovirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; BA000030; BAC69768.1; -; Genomic_DNA.
BioCyc; SAVE227882:SAV2057-MONOMER; -.
GO; GO:0003577; F:DNA binding; IEA.
GO; 00:0006355; P:regulation of transcription, DNA-dependent; IEA.
GO; GO:0006350; P:transcription; IEA.
                                                                                                                          NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].
STRAIN=MA-4680 / ATCC 31267 / NCIMB 12804 / NRL 8165;
MEDLINE=21477403; PubMed=11572948; DOI=10.1073/pnas.211433198;
OMUTA S., Ikeda H., Ishikawa J., Hanamoco A., Takahashi C.,
Shinose M., Takahashi Y., Horikawa H., Nakazawa H., Osonoe T.,
Kikuchi H., Shiba T., Sakaki Y., Hattori M.;
"Genome sequence of an industrial microorganism Streptomyces
avermitilis: deducing the ability of producing secondary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 55.6%; Score 5; DB 1; Length 115; Best Local Similarity 100.0%; Pred. No. 4.3e+02; Matches 5; Conservative 0; Mismatches 0; Indels
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115 AA; 12236 MW; C7A08EAZ339B8FD98 CRC64;
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SEQUENCE 109 AA; 12127 MW; 9BF1F50C411DFAD2 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No. 4.1e+02;
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Hypothetical protein.
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Distributed under the Creative Commons Attribution-NoDerivs License
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OŘFNames=Plut_1094;
Pelodictyon luteolum (strain DSM 273) (Chlorobium luteolum (strain DSM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US DOE Joint Genome Institute;

Copeland A., Lucas S., Lapidus A., Barry K., Detter J.C., Glavina T., Hammon N., Israni S., Pitluck S., Bryant D., Schmutz J., Larimer F., Hammon M., Kyrpides N., Ivanova N., Richardson P.;

"Complete sequence of Pelodictyon Inteolum DSM 273.";
Submitted (AUG-2005) to the EMBL/GenBank/DDBJ databases.
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STRAIN=MA-4680 / ARCC 31267 / NCIMB 12804 / NRRL 8165;
MEDLINE=22608306; PubMed-1269562; DOI=10.1038/nbbt820;
Ikeda H., Ishikawa U., Hanamoto A., Shinose M., Kikuchi H., Shiba T.,
                                                                                                                                                                                                                   Gaps
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Blectron transport; Heme; Iron; Metal-binding; Mitochondrion; Respiratory chain; Transmembrane; Transport.

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Bacteria, Actinobacteria, Actinobacteridae, Actinomycetales,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bacteria; Chlorobi; Chlorobia; Chlorobiales; Chlorobiaceae;
Chlorobium/Pelodictyon group; Pelodictyon.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              55.6%; Score 5; DB 2; Length 101, 100.0%; Pred. No. 3.9e+02; ive 0; Mismatches 0; Indels
                                                                                                                                                             55.6%; Score 5; DB 2; Length 95; 100.0%; Pred. No. 3.7e+02; Live 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; CP000096; ABB23956.1; -; Genomic_DNA.
Hypothetical protein.
SEQUENCE 101 AA; 11173 MW; AAEF2D3DE11B891C CRC64;
                                                                                                            95 AA; 10578 MW; E7F5ABDD28E269DE CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Streptomycineae; Streptomycetaceae; Streptomyces
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-10N-2003, integrated into UniProtKB/TrEMBL.
01-UNN-2003, sequence version 1.
07-FBB-2006, entry version 14.
07-PPD Protein.
OrderedLocusNames=SAV2057;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        22-NOV-2005, integrated into UniProtKB/TrEMBL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          101 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           109 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                          Q3B3XS_PELLD PRELIMINARY; PRT;
Q3B3XS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                22-NOV-2005, sequence version 1. 07-FEB-2006, entry version 3. Hypothetical protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QB2LF3 STRAW PRELIMINARY;
QB2LF3;
                                                                                                                                                                                                                5; Conservative
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                                                                                                                                                                                   Best Local Similarity
Matches 5; Conserv
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26 TWFLR 30
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                                                                                                                                                                                                                                                                                                                     77 ETWFL 81
                                                                                                                                                                                                                                                                    2 ETWFL 6
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRAIN=DSM 273;
                                                                                                       SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "Genomic sequence of an otitis media isolate of nontypeable.
Haemophilus influenzae: comparative study with H. influenzae serotype
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
      Distributed under the Creative Commons Attribution-NoDerivs License
                                                                                                                                                                                                                                   ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Haemophilus influenzae (strain 86-028NP).
Bacteria; Proteobacteria; Gammaproteobacteria; Pasteurellales;
Pasteurellaceae; Haemophilus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                 DB 2; Length 118;
3. 4.3e+02;
ches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 55.6%; Score 5; DB 2; Length 118; Best Local Similarity 100.0%; Pred. No. 4.3e+02; Matches 5; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                    13148 MW; 8EEA8775EFE424AD CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             118 AA; 13822 MW; 9FCB660420C82E38 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OrderedLocusNames=AZOSEA13290; ORFNames=ebA2387;
                                 EMBL; AAII01000014; EAN16946.1; -; Genomic_DNA. GO; GO:0020037; F:heme binding; IEA. GO; GO:0005506; F:heme binding; IEA. GO; GO:000497; F:noncoxygenase activity; IEA. GO; GO:0006118; P:electron transport; IEA. InterPro; IPR00139; BP450. PRINTS; PR001359; BP450.
                                                                                                                                                                                                                                                                                                                                                                                                               19-JUL-2005, integrated into UniProtKB/TrEMBL. 19-JUL-2005, sequence version 1. 07-FEB-2006, entry version 5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        04-JAN-2005, integrated into UniProtKB/TrEMBL. 04-JAN-2005, sequence version 1. 04-EBB-2006, entry version 8. Hypothetical protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA]
                                                                                                                                                                                                                                                                                                                                                                                   118 AA.
                                                                                                                                                                                                 55.6%; Score 5; DB 2
100.0%; Pred. No. 4.3
:ive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; CP000057; AAX88499.1; -; Genomic_DNA.
GO; GO:0003677; F:DNA binding; IEA.
GO; GO:0015074; F:DNA integration; IEA.
GO; GO:0006310; P:DNA recombination; IEA.
                                                                                                                                                                                                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;

    J. Bacteriol. 187:4627-4636(2005).

                                                                                                                                                                                                                                                                                                                                                                                                                                                               Putative integrase/recombinase.
                                                                                                                                                                                                                                                                                                                                                                                 PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OrderedLocusNames=NTHI1711;
                                                                                                                                                                                                                                   5; Conservative
                                                                                                                                                                    118 AA;
                                                                                                                                                                                                 Query Match
Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Complete proteome.
SEQUENCE 118 AA;
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61 FLRHP 65
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                                                                                                                                                                                                                                                               5 FLRHP 9
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Q5P5F8 AZOSE
ID Q5P5F8 AZOSE
AC Q5P5F8;
DT 04-JAN-2005, in
DT 07-F8E-2006, er
DB Hypothetical pr
GN OrderedLocusNam
                                                                                                                                                                                                                                                                                                                                                                               Q4QKE8 HAEI8
Q4QKE8;
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                                                                                                                                                                  SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                  Q4QKE8 HAEI8
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Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US DOB Joint Genome Institute (JGI-PGF);
Copeland A., Lucas S., Lapidus A., Barry K., Detter C., Glavina T.,
Hammon N., Israni S., Pitluck S., Richardson P.;
"Sequencing of the draft genome and assembly of Frankia sp. EANIpec.";
Submitted (JUN-2005) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                          Hypothetical 12 kba early protein.
Human adenovirus 5 (HAdV-5).
Viruses; dsDNA viruses, no RNA stage; Adenoviridae; Mastadenovirus.
NCBI_TaxID=28285;
                                                                                                                                                                                                                                                                                                                                                                                                              Distributed under the Creative Commons Attribution-NoDerivs License
                                                                                                                                                                                                                                                         STRAIN=NHRC Ad5FS 7151,
Epidemic Outbreak Surveillance (EOS);
Epidemic Outbreak Surveillance (EOS);
Epidemic Outbreak Surveillance (EOS);
Ospina R., Reynolds T., Rowley R., Hanson E., Seto D.;
"The complete nucleotide sequence and genome organization of Human adenovirus serotype 5, field strain.";
Submitted (APR-2004) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRAIN-EANIDEC;
US DOE Joint Genome Institute (JGI-ORNL);
Larimer F., Land M.;
Larimer F., Land M.;
"Annotation of the draft genome assembly of Frankia sp. EANIDEC.";
Submitted (JUN-2005) to the EMBL/GenBank/DDBJ databases.
-! CAUTION: The sequence shown here is derived from an
EMBL/GenBank/DDBJ whole genome shotgun (WGS) entry which is
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 2; Length 115;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hypothetical protein.
SEQUENCE 115 Aa, 12210 MW; DF1B2DA239AA7F08 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 5; DB 2; Le
Pred. No. 4.3e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11-OCT-2005, integrated into UniProtKB/TrEMBL.
11-OCT-2005, sequence version 1.
07-FEB-2006, entry version 3.
                                                                                                               07-MAR-2006, integrated into UniProtKB/TrEMBL
                                                                                   115 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             118 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%; Prec. ...
                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; AY601635; AAW65500.1; -; Genomic_DNA
                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                               07-MAR-2006, sequence version 1.
07-MAR-2006, entry version 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                               PRELIMINARY;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Putative cytochrome P450.
ORFNames=Franean1DRAFT_5182;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ouery Match
Best Local Similarity 100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         preliminary data.
                                                                                                                                                                                                                                             NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Frankia sp. EAN1pec.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=298653;
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ETWFL 7
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Q3WDX0;
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                                                                               QZKS22_ADE05
Q2KS22;
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                                                                  ADE05
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Distributed under the Creative Commons Attribution-NoDerivs License
                                                                                                                                                                                 STRAIN=SCRI 1043 / ArCC BAA-672;
PubMed=15.65.089; DOI=10.1073/pnas.0402424101;
Bell K.S., Sebaihia M., Pritchard L., Holden M.T.G., Hyman L.J.,
Holeva M.C., Thomson N.R., Bentley S.D., Churcher L.J.C., Mungall K.,
Aktin R., Bason N., Brooks K., Chillingworth T., Clark K., Doggett J.,
Fraes A., Hance Z., Hauser H., Jagels K., Moule S., Norbertczak H.,
Ormond D., Price C., Quail M.A., Sanders M., Walker D., Whitehead S.,
Salmond G.P.C., Birch P.R.J., Parkhill J., Toth I.K.,
Genome sequence of the enterobacterial phytopathogen Erwinia
"Genotevora subsp. atroseptica and characterization of virulence
                                                       Erwinia carotovora gubsp, atroseptica (Pectobacterium atrosepticum).
Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
Enterobacteriaceae; Pectobacterium.
                                                                                                                                                                                                                                                                                                                                                                                                           Proc. Natl. Acad. Sci. U.S.A. 101:11105-11110(2004).
-!- SUBCELLUIAR LOCATION: Bacterial cell inner membrane; multi-pass membrane protein (By similarity).
-!- SIMILARITY: Belongs to the crcB family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Xenopus tropicalis (Western clawed frog) (Silurana tropicalis).
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
Xenopodinae; Xenopus; Silurana.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Complete proteome; Inner membrane; Membrane; Transmembrane. CHAIN 127 Protein crcB homolog.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      55.6%; Score 5; DB 1; Length 127; 100.0%; Pred. No. 4.6e+02;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Vempati U.D., King M.L.;
Submitted (APR-2000) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADED63C701397633 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Protein crcB homolog.
/FTId=PRO_000110100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-DEC-2001, integrated into UniProtKB/TrEMBL
                                                                                                                                                                NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    128 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL, BX950851, CAG74205.1; -; Genomic_DNA. GenomeReviews, BX950851_GR; ECA1295.
HAMAP; MF 00454; -; 1.
InterPro; IPR003691; Camphor_CrcB.
Pfam, PF02337; CRCB; 1.
TIGRFAMS; TIGR00494; crcB; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Mismatches
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Potential.
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                                          Name=crcB; OrderedLocusNames=ECA1295;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            T 28
6 XENTR
Q902Z6_XENTR PRELIMINARY; PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-DEC-2001, sequence version 1. 07-FEB-2006, entry version 12.
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13391 MW;
07-MAR-2006, entry version 15.
Protein crcB homolog.
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91
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127 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FLRHP 59
                                                                                                                           NCBI_TaxID=29471;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Name=Xcat-2;
                                                                                                                                                                                                                                                                                                                                                                                            factors."
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SEQUENCE
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                                                                                                                                                                                                                                                                    Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms Distributed under the Creative Commons Attribution-NoDerivs License
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Copeland A., Lucas S., Lapidus A., Barry K., Detter J.C., Glavina T., Hammon N., Israni S., Pitluck S., Di Bartolo G., Chain P., Schmutz J., Larimer F., Land M., Lykidis A., Richardson P.;

"Complete sequence of Thermobifida fusca YX.";
Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                     "The genome sequence of an anaerobic aromatic-degrading denitrifying
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Distributed under the Creative Commons Attribution-NoDerivs License
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                                                                                                                     Pubbed=15551059; DOI=10.1007/s00203-004-0742-9;
Rabus R., Kube M., Heider J., Beck A., Heitmann K., Widdel F.,
Reinhardt R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OrderedLocusNames=Tfu_0669;
Thermobifida fusca (strain YX).
Bacteria; Actinobacteria; Actinobacteridae; Actinomycetales;
Streptosporangineae; Nocardiopsaceae; Thermobifida.
              Bacteria, Proteobacteria, Betaproteobacteria, Rhodocyclales,
Rhodocyclaceae, Azoarcus.
NCBI_TaxID=76114;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 2; Length 124;
                                                                                                                                                                                                                                                                                                                                                                                                                 DB 2; Length 122;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Indels
                                                                                                                                                                                                                                                                                                                              EMBL, CR555306; CA107454.1; -; Genomic DNA.
Complete protecome; Hypothetical protein.
SEQUENCE 122 AA; 13581 MW; 18B790A94ECD3255 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Complete protecome, Hypothetical protein.
SEQUENCE 124 AA; 14456 MW; 5F749F9A86A83FC0 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q6D7NO;
05-JUL-2005, integrated into UniProtKB/Swiss-Prot.
16-AUG-2004, sequence version 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; Pred. No. 4.5e+02; ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13-SEP-2005, integrated into UniProtKB/TrEMBL
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NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               124 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   55.6%; Score 5; DB 2
100.0%; Pred. No. 4.5
:ive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                   Score 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                                                                                                          bacterium, strain EbN1.";
Arch. Microbiol. 183:27-36(2005).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       13-SEP-2005, sequence version 1. 07-FEB-2006, entry version 4. Hypothetical protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                   55.6%;
    Azoarcus sp. (strain EbN1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity 100.
Matches 5; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                            5; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=269800;
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FLRHP 20
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Q47S60;
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CRCB_ERWCT
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NUCLEOTIDE SEQUENCE.
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Best Local Similarity
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  NCBI_TaxID=306254;
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        of Bacillaceae.";
                                                                                                                                                                                                                                                                                                                      1 IETWF 5
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PubMed=15316277
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QETIWI;
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                                                                                                                                                                                                                                                                                                                                                                                       STRAIN=E264;
Fraser C.M., Casjens S., Huang W.M., Sutton G.G., Clayton R.A.,
Lathigra R., White O., Ketchum K.A., Palmer N., Dodgon R.,
Hickey E.K., Gwinn M., Dougherty B., Fleischmann R.D., Richardson D.,
Peterson J., Kerlavage A.R., Quackenbush J., Salzberg S., Hanson M.,
van-Vugt R., Adams M.D., Gocayne J.D., Weidman J., Utterback T.,
Watthey L., McDonald L., Artiach P., Bowman C., Garland S., Fujii C.,
Cotton M.D., Horst K., Tomb J.-F., Roberts K., Hatch B., Smith H.O.,
                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bacteria; Proteobacteria; Epsilonproteobacteria; Campylobacterales;
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                                                                                                                                                                                                                                                                                                                              Bacteria, Proteobacteria, Betaproteobacteria, Burkholderiales,
Burkholderiaceae, Burkholderia, pseudomallei group.
NCBI_TaxID=271848;
                                                                                                    55.6%; Score 5; DB 2; Length 128; 100.0%; Pred. No. 4.6e+02; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    55.6%; Score 5; DB 2; Length 130; 100.0%; Pred. No. 4.7e+02; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.
        EMBL; AF256086; AAK49295.1; -; mRNA.
GO; GO:0003723; F:RNA binding; IEA.
GO; GO:0008470; F:zinc ion binding; IEA.
GO; GO:0006445; P:regulation of translation; IEA.
INTERPRO$ Nanos RNA_bd.
Pfam; PF05741; zf-nanos; 1.
SEQUENCE 128 AA; 14140 MW; E79556DEFIC0880B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; CP000086; ABC36802.1; -; Genomic_DNA.
Hypothetical protein.
SEQUENCE 130 AA; 14536 MW; D2998BDEE2181906 CRC64;
                                                                                                                                                                                                                                                      24-JAN-2006, integrated into UniProtKB/TrEMBL.
24-JAN-2006, sequence version 1.
07-FEB-2006, entry version 2.
ORPOCCHELICAL protein.
ORFNames=BTH I1318,
Burkholderia thailandensis E264.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16-AUG-2005, integrated into UniProtKB/TrEMBL
                                                                                                                                                                                                                                     130 AA
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QZSYY4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q4HDPS CAMCO PRELIMINARY; PRT; Q4HDPS;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    16-AUG-2005, sequence version 1.
07-FEB-2006, entry version 2.
Hypothetical protein.
ORFNames=CCOA0060;
Campylobacter coli RM2228.
Plasmid pCC178.
                                                                                                    Query Match 55.6
Best Local Similarity 100.
Matches 5; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
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les 5; Conserv
                                                                                                                                                                        117 FLRHP 121
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Q2SYY4_BUR
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Schaffer C., Messner P.; "Strate-layer glycoproteins: an example for the diversity of "Surface-layer glycoproteins an example for the diversity of bacterial glycosylation with promising impacts on nanobiotechnology."; Glycobiology 14:31R-42R(2004).
Fouts D.E., Mongodin E.F., Mandrell R.E., Miller W.G., Rasko D.A., Jacques R.J., Brinkac L.M., DeBoy R.T., Parker C.T., Daugherty S.C., Dodson R.J., Durkin A.S., Madupu R.R., Sullivan S.A., Shetty J.U., Alyodeji M.A., Shvartsbeyn A.A., Schatz M.C., Badger J.H., Fraser C.M. Nelson K.E., "Major structural and novel potential virulence mechanisms from the genomics of multiple Campylobacter species."; Submitted (DEC-2004) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Novotny R., Pfoestl A., Messner P., Schaffer C.; "Genetic organization of chromosomal S-layer glycan biosynthesis loci
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                  -!- CAUTION: The sequence shown here is derived from an EMBL/GenBank/DDBJ whole genome shotgun (WGS) entry which
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  55.6%; Score 5; DB 2; Length 132; 100.0%; Pred. No. 4.7e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; AAFL01000016; EAL55992.1; -; Genomic_DNA.
Hypothetical protein; Plasmid.
SEQUENCE 130 AA; 15007 MW; DDF9E96COD0262FC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15708 MW; 603062293C9D57B0 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Aneurinibacillus thermoaerophilus.
Bacteria, Firmicutes, Bacillales, Paenibacillaceae,
Aneurinibacillus group, Aneurinibacillus.
NCBI TaxID=143495;
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PubMed=15044388; DOI=10.1093/glycob/cwh064;
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GO; GO:0016787; F:hydrolase activity; IEA.
GO; GO:0004518; F:muclease activity; IEA.
InterPro; IPR012337; RNaseH_fold.
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21-FEB-2006, entry version 16.
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Distributed under the Creative Commons Attribution-NoDerivs License
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US DOB Joint Genome Institute (JGI-PGF);
Copeland A., Lucas S., Lapidus A., Barry K., Detter C., Glavina T.,
Hammon N., Israni S., Pitluck S., Richardson P.;
"Sequencing of the draft genome and assembly of Kineococcus
radiotolerans SRS30216.";
submitted (JUN-2005) to the EMBL/GenBank/DDBJ databases.
Brooks K., Brown K.A., Brown N.F., Challis G.L., Cherevach I., Chillingworth T., Cronin A., Crossett B., Davis P., DeShazer D., Feltwell T., Fraser A., Hance Z., Hauser H., Holtroyd S., Jagels K. Keith K.E., Maddison M., Macce S., Price C., Quail M.A., Sanbinowitsch B., Rutherford K., Sanders M., Simmonds M., Songsivilai S., Stevens K., Tumapa S., Vesaratchavest M., Mitchead S., Yaeats C., Barrell B.G., Oyston P.C.F., Parkhill J.; Burkholderia pseudomallei."; Proc. Natl. Acad. Sci. U.S.A. 101:14240-14245(2004).
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Copeland A., Lucas S., Lapidus A., Barry K., Detter C., Glavina Hammon N., Israni S., Pitluck S., Richardson P.;
Submitted (JUN-2005) to the BMEL/GenBank/DDBJ databases.
-! - CAUTION: The sequence shown here is derived from an EMBL/GenBank/DDBJ whole genome shotgun (WGS) entry which is
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Kinecoccus radiotoTerans SRS30216.
Bacteria, Actinobacteria, Actinobacteridae; Actinomycetales;
Frankineae; Kineosporiaceae; Kineococcus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 55.6%; Score 5; DB 2; Length 133; 100.0%; Pred. No. 4.8e+02; ive 0; Mismatches 0; Indels
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InterPro; IPR011944; CHP2246.
TIGRRAMS; TIGR02246; Cons_hypoth_2246; 1.
Complete proteome; Hypothetical protein.
SEQUENCE 133 AA; 14819 MW; F6065863EAAS913E CRC64;
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Q411L0;
27-SEP-2005, integrated into UniProtKB/TrEMBL.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PUDMed=1537793; DOI=10.1073/pnas.0403306101; Nelson K.E., PubMed=15377793; DOI=10.1073/pnas.0403306101; Nelson K.E., Nelson W.C., DeStazer D., Kim H.S., Tettelln H., Nelson K.E., Feldblyum T.V., Ulrich R.L., Ronning C.M., Brinkac L.M., Daugherty S.C., Davidsen T.D., DeBoy R.T., Dimtrov G., Dodson R.J., Durkin A.S., Gwinn M.L., Haft D.H., Khouri H.M., Kolonay J.F., Madupu R., Mohammoud Y., Nelson W.C., Radune D., Romero C.M., Sarria S., Selengut J., Shamblin C., Sullivan S.A., White O., Yu Y., Zafar N., Zhou L., Fraser C.M.; "Structural flexibility in the Burkholderia mallei genome."; Proc. Natl. Acad. Sci. U.S.A. 101:14246-14251(2004).
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Burkholderia pseudomallei (Pseudomonas pseudomallei).
Barceria; Proteobacteria; Betaproteobacteria; Burkholderiales;
Burkholderiaceae; Burkholderia; pseudomallei group.
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                                                                                                                                                                                                                                                                                                                                                                                                                             Burkholderia mallei (Pseudomonas mallei).
Bacteria; Proteobacteria; Betaproteobacteria; Burkholderiales;
Burkholderiaceae; Burkholderia.
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TIGREAMS; TIGR02246; Cons hypoth 2246; 1.

Complete proteome; Hypothetical protein.

SEQUENCE 133 AA; 14849 MW; F61094D42700C13E CRC64;
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                                                                                                                                                                                                                                                                                         25-OCT-2004, integrated into UniProtKB/TrEMBL.
25-OCT-2004, sequence version 1.
970-FEB-2006, entry version 8.
970-FEB-2006, entry version 8.
OrderedLocusNames=BMA2316;
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        Mismatches
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100.0%; Pred. No.
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Gaps

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Nat. Biotechnol. 21:526-531(2003).
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                                             NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].
STRAIN=MA-4680 / ATCC 31267 / NCIMB 12804 / NRRL 8165;
MEDLINE=22608306; PubMed=12692562; DOI=10.1038/nbt820;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Complete proteome; Hypothetical protein.
SEQUENCE 136 AA; 14797 MW; BAIELAID59C1F6F3 CRC64;
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BioCyc; SAVE227882:SAV3400-MONOMER; -.
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STRAIN=MA-4680 / ATCC 31267 / NCIMB 12864 / NRRL 8165;
MEDLINE=21477403; PubMed=11572948; DOI=10.1073/pnas.21433198;
Omutra S., Ikeda H., Ishikawa J., Hanamoto A., Takahashi C.,
Shinose M., Takahashi Y., Horikawa H., Nakazawa H., Osonoe T.,
Kikuchi H., Shiba T., Sakaki Y., Hattori M.;
"Genome sequence of an industrial microorganism Streptomyces avermitilis: deducing the ability of producing secondary
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Bacteria; Actinobacteria; Actinobacteridae; Actinomycetales;
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EMBL; AAEF02000024; EAM74977.1; -; Genomic_DNA.
Hypothetical protein.
SEQUENCE 134 AA; 15058 MW; F037BBE97A0D4676 CRC64;
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SEQUENCE 136 AA; 15922 MW; 852D6DDIB1626B5C CRC64;
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NCBI_TaxID=166279;
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Distributed under the Creative Commons Attribution-NoDerivs License
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Fraser C.M., Norris S.J., Weinstock G.M., White O., Sutton G.G., Dodson R.J., Gwinn M.L., Hickey E.K., Clayton R.A., Ketchum K.A., Sodergren E., Hardham J.M., McLeod M.P., Salzberg S.L., Peterson J.D., Khalak H.G., Richardson D.L., Howell J.K., Chidambaram M., Utterback T.R., McDonald L.A., Artiach P., Bowman C., Cotton M.D., Pujii C., Garland S.A., Hatch B., Horst K., Roberts K.M., Sandusky M., Weidman J.F., Smith H.O., Venter J.C., "Complete genome sequence of Treponema pallidum, the syphilis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Membrane; Protein transport; Translocation; Transmembrane; Transport. SEQUENCE 137 AA; 15724 MW; AF8121BC67B76F2E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE=98332770; PubMed=9665876; DOI=10.1126/science.281.5375.375;
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                                                                                                                                                                                                                                                                                                                                           Spirochaetes; Spirochaetales; Spirochaetaceae; Treponema.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Science 281:375-388(1998).
-!- SUBCELLULAR LOCATION: Membrane-bound. Mitochondrial; inner
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].
                                                                                  01-NOV-1998, integrated into UniProtKB/TrEMBL.
        137 AA.
                                                                                                                                                                                                                                                    OrderedLocusNames=TP0563; ORFNames=TP_0563;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; AE000520; AAC65546.1; -; Genomic_DNA.
        PRT;
                                                                                                                          01-NOV-1998, sequence version 1. 07-FEB-2006, entry version 25. Hypothetical protein.
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PRELIMINARY;
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                                                                                                                                                                                                                                  "An integrated gene annotation and transcriptional profiling approach towards the full gene content of the Drosophila genome."; Genome Biol. 5:RESEARCH0003.1-RESEARCH0003.17(2003).
-!- MISCELLANEOUS: The sequence shown here is derived from an EMBL/GenBank/DDBJ third party annotation (TPA) entry.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN=FB24,
US DOB Joint Genome Institute (PGF-ORNL);
Larimer F., Land M.;
"Annotation of the draft genome assembly of Arthrobacter sp. FB24.";
submitted (JUN-2005) to the EMBL/Genbank/DDBJ databases.
-!- CAUTION: The sequence shown here is derived from an
EMBL/Genbank/DDBJ whole genome shotgun (WGS) entry which is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US DDE Joint Genome Institute (JGI-PGF);
Copeland A., Lucas S., Lapidus A., Barry K., Detter C., Glavina T., Hammon N., Israni S., Pitluck S., Richardson P.;
"Sequencing of the draft genome assembly of Arthrobacter sp. FB24.";
Submitted (JUN-2005) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                        Pubmed=14709175; DOI=10.1186/gb-2003-5-1-r3;
Hild M., Beckmann B., Haas S.A., Koch B., Solovyev V., Busold C.,
Fellenberg K., Boutros M., Vingron M., Sauer F., Hoheisel J.D.,
Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroidea; Drosophilidae; Drosophila.
NCBI_TaxID=7227;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Arthrobacter sp. FB24.
Bacteria, Actinobacteridae, Actinomycetales, Micrococcineae, Micrococcaceae, Arthrobacter.
NCBI_TaxID=290399;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       55.6%; Score 5; DB 2; Length 139; 100.0%; Pred. No. 4.9e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL, BK003633; DAA02231.1; -; Genomic_DNA.
SEQUENCE 139 AA; 14909 MW; DBA4F99D68E4045D CRC64;
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EMGO; GO:0006189; F:electron transporter activity; IEA.

GO; GO:0006118; P:electron transport; IEA.

InterPro; IPR011915; GlxX_actino.

InterPro; IPR012336; Thioradxn-like_fd.

InterPro; IPR006662; Thiored.

InterPro; IPR006663; Thiored.
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19-UUL-2005, sequence version 1.
07-MAR-2006, entry version 5.
Similar to Glutaredoxin and related proteins.
ORFNames=ArthDRAFT_0289;
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Best Local Similarity 100.
Matches 5, Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Seshadri R., Myers G.S.A., Tettellin H., Eisen J.A., Heidelberg J.F., Bodson R.J., Davidsen T.M., DeBoy R.T., Fouts D.E., Haft D.H., Selengut J., Ren Q., Brinkac L.M., Madupu R., Kolonay J.F., Durkin S.A., Daugherty S.C., Shetty J., Shvartsbeyn A., Gebregeorgis E., Geer K., Tsegaye G., Malek J.A., Ayodeji B., Shatsman S., McLeod M.P., Smajs D., Howell J.K., Pal S., Amin A., Washisth P., McNeill T.S., Xing Q., Sodergren E., Baca E., Weinstock G.M., Norris S.J., Fraser C.M., Paulsen I.T., Which ther spirochete genome of the oral pathogen Treponema denticola with other spirochete genomes.";

-I. SUBCELLULAR LOCATION: Membrane-bound. Mitochondrial; inner
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Bacteria; Spirochaetes; Spirochaetales; Spirochaetaceae; Treponema.
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GO; GO:0031072; F:heat shock protein binding; IEA.
GO; GO:0031072; F:heat shock protein binding; IEA.
GO; GO:0006457; P:protein folding; IEA.
InterPro; IPRO1623; DnaJ.N.
Pfam; PF00226; DnaJ; 1.
SNART; SM00271; DnaJ; 1.
SNART; SM00271; DnaJ; 1.
Frotein transport; Translocation; Transmembrane; Protein transport; Translocation; Transmembrane; Transport.
SEQUENCE 137 AA; 15752 MW; D2AA37F990E7D4EC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           55.6%; Score 5; DB 2; Length 137; 100.0%; Pred. No. 4.9e+02; ive 0; Mismatches 0; Indels
                             Indels
       100.0%; Pred. No. 4.9e+02; ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             [1] NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].
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                                                                                                                                                                                                                                                                                       05-JUL-2004, integrated into UniProtKB/TrEMBL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRAIN=ATCC 35405 / DSM 14222;
PubMed=15064399; DOI=10.1073/pnas.0307639101;
                                                                                                                                                                                                                                                                                                                                                                                   OrderedLocusNames=TDE0961; ORFNames=TDE_0961;
                                                                                                                                                                                                                                           137 AA.
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                                                                                                                                                                                                                                      Q73P38_TREDE PRELIMINARY; PRT; Q73P38;
                                                                                                                                                                                                                                                                                                               05-JUL-2004, sequence version 1. 07-FEB-2006, entry version 10.
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Matches 5; Conservative
                                  5; Conservative
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         Best Local Similarity
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RESULT 39
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DR PRINTS; PR00421; THIOREDOXIN.

DR TIGRPAMS; TIGR02200; GlrX actino; 1.

DR PROSITE; PS00194; THIOREDŌXIN; UNKNOWN 1.

SQ SEQUENCE 139 AA; 14842 MW; 1886C4Ē6BBBGEG CRC64;

Query Match

S5.6%; Score 5; DB 2; Length 139;

Best Local Similarity 100.0%; Pred. No. 4.9e+02;

Matches 5; Conservative 0; Mismatches 0; Indels 0; Gaps

QY S PLRHP 9

19 FLRHP 23
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Search completed: August 31, 2006, 10:39:41 Job time : 140.25 secs

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GenCore version 5.1.9 Copyright (c) 1993 - 2006 Biocceleration Ltd. OM protein - protein search, using sw model	August 31, 2006, 10	Title: DENGUE_SEROTYPE3 Perfect score: 9 Sequence: 1 retwflrhp 9	Scoring table: OLIGO Gapop 60.0 , Gapext 60.0	ched: 2	Word size : 1 Total number of hits satisfying chosen parameters: 2564502	Length: 0 Length: 2	ocessing: Listin	a'	3: geneeqp2000s:* 4: geneseqp2001s:* 5: geneseqp2002s:*		0	Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.		Result Query No. Score Match Length DB ID Description	8 88.9 39 9 ADW12582 8 88 9 48 9 ADW12588	6 66.7 278 8 ADQ25888 Adq25888 6 66.7 826 5 ABB07253 Abb07253	6 66.7 827 6 ABU07568 . Abu07568 6 66.7 904 4 ABG09947 Abg09947	6 66.7 924 5 AAB71323 Aab71323 Human 6 66.7 953 7 ADE34415 Ade34415 Human	9 6 66.7 994 5 ABB07252 Abb07252 0 66.7 994 5 AAU99808	Human	3 6 66.7 994 8 ADQ25892 Adq25892 Human 4 · 6 66.7 1018 5 AAE25061 Aae25061 Human	5 6 66.7 1070 6 ABU07567 Abu07567 Abu107567 Abu11658 Novem	7 6 66.7 123.7 ADD7444 Adf70474 Orphan	8 55.6 28 10 AEE37134 Ace37134 Human 9 55.6 34 4 AAU17769 Aau17769 Novel	5 55.6 34 7 AD196923 Ad196923 Human Ad196923 Human	2 5 55.6 52 6 ABG99963 3 5 55.6 60 4 AAU42843

Abm39362
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Human pol-Lactcobaci Human PRO Human PRO Human PRO Human PRO Human PRO Novel hum Human sec Human sec Human sec Human sec Human sec Human sec Human sec Human sec Human sec Novel hum

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                                                                                                                                                                            New isolated and purified ApoptoM peptide comprises 9 amino acids, useful as a vaccine for preventing or treating pathological conditions from non-specific febrile illnesses to severe hemorrhagic manifestations or encephalitic syndromes.
                                                                                                                                                                                                                                                            The present invention relates to an isolated and purified ApoptoM peptide. The invention is useful as a vaccine for the prevention and treatment of pathological conditions from non-specific febrile illnesses pathological conditions, encephalitic syndromes and these pathological conditions are linked to Flavivirus infection or cancers. The invention is also useful in gene therapy. The present sequence is a M1-40/DEN (dengue)-2 (F36) mutant protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gene therapy, protein purification, virucide, cytostatic, vaccine, hemorrhage, bleeding, infection, flavivirus infection, neoplasm, cancer, DEN, dengue, EGFP, enhanced green fluorescent protein.
                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       p(95-114) EGFP(M1-M40)DEN-2 (136F) plasmid DNA encoded protein #3.
                                                                                                                                                                                                                                                                                                                                                                                                  ;
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                                                                                                                                                                                                                                                                                                                                                                            Length 39;
                                                                                                                                                                                                                                                                                                                                                                            88.9%; Score 8; DB 9;
100.0%; Pred. No. 0.03;
ive 0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADW12588 standard; protein; 48 AA.
                                                                   30-JUN-2003; 2003US-00608029
                                                                                        30-JUN-2003; 2003US-00608029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                    8; Conservative
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                                                                                                                                     Catteau A;
                                                                                                               (INSP ) INST PASTEUR.
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                                                                                                                                                           WPI; 2005-047647/05.
                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                         ETWFLRHP
                                                                                                                                                                                                                                                                                                                                                                                                                                             ETWFLRHP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Misc-difference
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                       US2004266987-A1
                                                                                                                                                                                                                                                                                                                                                     Sequence 39 AA;
 Dengue virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Dengue virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  24-MAR-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unidentified
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                                                                                                                                     Despres P,
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ADW12588
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Human sec
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Human PRO
Human sec
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Human sec
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                                                                                                                                                                                                                                                                                                                                                                                                                                      sec
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Abu92592
Abc08669
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Abc08669
Abc08669
Abu86610
Abu86610
Abu898770
Abu89384
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Abc93384
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Abo15992 |
Abo13698 |
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Abu65601
Abo07449
Abo03636
Abr67084
Abo15687
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Abu65296
Abu95241
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ABU92592
ABO08669
ABO08666
ABO0866771
ABR74877
ABU84637
ABU94870
ABU9788
ABU9708938
ABU6225
ABU6448
ABU904466
ABU904466
ABU904466
                                                                                                                                                                                ABR98774
ABO16297
ABR92197
ABO18838
ABR78259
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ABU84995
ABO0134
ABO011466
ABO02111
ABU88685
ABU88685
ABU886181
ABU86181
ABU89217
ABU99279
ABO09279
ABO19143
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ABO03636
ABR67084
ABO15687
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ABR99384
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ABO13698
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ABR60068
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30-JUN-2003; 2003US-00608029

ADW12582

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Example 5; SEQ ID NO 16; 104pp; Japanese.
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                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens.
                                                                                                                                                                                                                                                                                                     ABB07253;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hu Y,
                                                                                                                                                                                                                                                    RESULT 4
                                                                                                                                                                                                                                                                 ABB07253
   8X888888888888
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                                                                                                                                                                                                       The present invention relates to an isolated and purified ApoptoM peptide. The invention is useful as a vaccine for the prevention and treatment of pathological conditions from non-specific febrile illnesses to severe hemorrhagic manifestations, encephalitic syndromes and these pathological conditions are linked to Flavivirus infection or cancers. The invention is also useful in gene therapy. The present sequence is a p(95-114) EGFP (enhanced green fluorescent protein) (M1-M40) DEN (dengue) -2 (136F) plasmid DNA encoded protein.
                                                                                                                          useful
                                                                                                                       New isolated and purified ApoptoM peptide comprises 9 amino acids, useful as a vaccine for preventing or treating pathological conditions from nonspecific febrile illnesses to severe hemorrhagic manifestations or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              receptor; GPCR; guanosine triphosphate-binding protein-coupled receptor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New polynucleotide encoding guanosine triphosphate-binding protein-
coupled receptor, for use in developing a therapeutic agent for medical
treatment.
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                                                                                                                                                                                                                                                                                                                                                                              0; Indels
                                                                                                                                                                                                                                                                                                                                                      Length 48;
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                                                                                                                                                                                                                                                                                                                                                             100.0%; Pred. ....
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                                                                                                                                                                                      Disclosure; SEQ ID NO 35; 30pp; English.
                                                                                                                                                                                                                                                                                                                                         88.9%; Score 8; F
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADQ25888 standard; protein; 278 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human GPCR related protein #1
             30-JUN-2003; 2003US-00608029.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2002JP-00366417
2003JP-00055691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                            encephalitic syndromes.
                                                             Catteau A;
                                   (INSP ) INST PASTEUR
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                                                                                    2005-047647/05.
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                                                                                                                                                                                                                                                                                                                                                                                                     ETWFLRHP 9
                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity
Matches 8; Conserv
                                                                                                 N-PSDB; ADW12589
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                                                                                                                                                                                                                                                                                                                             Sequence 48 AA;
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03-MAR-2003;
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                                                           Despres P,
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The invention provides novel G coupled protein receptor (GPCR) proteins
and polynucleotides encoding the same. The novel GPCR (NGPCR) proteins
can be expressed by standard recombinant methodology. The NGPCR proteins
and polynucleotides are useful for diagnosis, in treatment of diseases,
car behavioural disorders, for the detection of mutant GPCRs or
inappropriately expressed GPCRX for the diagnosis of disease, and for
screening drugs effective in the treatment of the symptomatic or
phenotypic manifestations of perturbing the normal function of GPCR in
the body. The NGPCR proteins are useful for the generation of antibodies,
as reagents in diagnostic assays, for the identification of other
cellular gene products related to a GPCR, as reagents in assays for
cellular gene products related to a GPCR, as reagents in assays for
cellular gene products related to a GPCR, as reagents in assays for
the reagents compounds that can be used as pharmaceutical reagents for the
therapeutic treatment of mental, biological on medical disorders and
diseases, and for identifying compounds useful in the therapeutic
treatment of obesity, inflammation, immune disorders, diabetes, heart and
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New polypeptide, useful for generation of antibodies and for screening compounds for treatment of mental, biological or medical disorders and diseases, comprises the isolated G coupled protein receptor polypeptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     G coupled protein receptor; GPCR; NGPCR; cytostatic; anorectic; cancer; antiinflammatory; immunosuppressive; antidiabetic; human.
The present invention provides the protein and coding sequences of a human guanosine triphosphate-binding protein-coupled receptor (GPCR). sequences are useful for treating diseases related to the abnormality the expression of GPCR, and for developing a therapeutic agent for medical treatment. The present sequence is a protein shown in the exemplification of the invention.
                                                                                                                                                                                                                                                    Gaps
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                                                                                                                                                                                                      Length 278
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                                                                                                                                                                                                          DB 8;
                                                                                                                                                                                                      66.7%; Score 6; DB 8;
100.0%; Pred. No. 35;
ive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Walke DW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABB07253 standard; protein; 826 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 8; Page 81-83; 85pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human novel GPCR (NGPCR) protein.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11-MAY-2001; 2001WO-US015048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12-MAY-2000; 2000US-0203875P.
30-MAY-2000; 2000US-0207932P.
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                                                                                                                                                                                                                                                    6; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2002-114231/15.
N-PSDB; ABA94352.
                                                                                                                                                                                                                                                                                                                                      185 WFLRHP 190
                                                                                                                                                                                                      Query Match
Best Local Similarity
Matches 6; Conserv
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                                                                                                                                                              Sequence 278 AA;
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Sequence 827 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ABG09947;
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                                                                                                                                                                                                                                                                                                                                                     Human; receptor; GPCR; G protein-coupled receptor; secretin; obesity; cardiovascular disorder; diabetes; infection; HIV; pain; cancer; human immunodeficiency virus infection; anorexia; bulimia; asthma; Parkinson's disease; acute heart failure; hypotension; hypertension; urinary retention; osteoporosis; angina pectoris; myocardial infarction; ulcer; allergy; banign prostatic hypertrophy; psychosis; neurological disorder; anxiety; schizophrenia; manic depression; delirium; dementia; mental retardation; dyskinesia; Huntington's disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New isolated polynucleotide encoding human secretin-type G protein-coupled receptor (GPCR) polypeptides, useful for preventing or treating diseases associated with GPCR dysfunction, e.g. cardiovascular disease or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention relates to an isolated polynucleotide which: (a) encodes a human secretin-type G protein-coupled receptor (GPCR) polypeptide; (b) comprises a sequence appearing as ABX12778 and ABX15279; (c) hybridises under stringent conditions to the polynucleotide in (A) and (B); (d) has a sequence deviating from (A)-(C) due to the degeneration of the genetic code; or represents a fragment, derivative or allelic variation of (A)-(D). Also included are an expression vector containing the above polynucleotide, a host cell containing the expression vector, a substantially purified human secretin-type GPCR polypeptide, methods of screening for agents which modulate or decrease the activity of a human
metabolic disorders, and cancer. The present sequence
                                                                                                        Gaps
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                                                                         Length 826;
                                                                                                     0; Indels
                                                                                                                                                                                                                                                                                                                              Human secretin type G protein-coupled receptor #2.
                                                                         DB 5;
                                                                        66.7%; Score 6; DB 5
100.0%; Pred. No. 89;
ive 0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                    ABU07568 standard; protein; 827 AA.
             represents a human NGPCR protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 1; Fig 7; 127pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        03-JUN-2002; 2002WO-EP006031.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    04-JUN-2001; 2001US-0294998P.
26-JUL-2001; 2001US-0307608P.
                                                                      66.78;
                                                                                                                                                                                                                                                                                                20-MAR-2003 (first entry)
                                                                                                     6; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Koehler RH, Smolyar A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tourette's syndrome.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2003-140623/13.
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                                                                                         Local Similarity
                                                                                                                                                           WFLRHP 26
                                                                                                                                 4 WFLRHP 9
 disease,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (FARB ) BAYER AG.
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                                              Sequence 826 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200299106-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens.
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                                                                                                                                                                                                                                                                  ABU07568;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                diabetes.
                                                                           Query Match
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8 \times 3 \times 3
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secretin-type GPCR, methods of reducing the activity of the human secretin-type GPCR, the identified modulators, The polynucleotide is useful in preventing, ameliotating, or treating diseases associated with human secretin-type GPCR dysfunction. The polynucleotide may also be used as hybridisation probes or primers, and in diagnostic assays or in genetic testing. The methods are useful in producing and detecting the polynucleotide and polypeptide and in screening of agents that modulate the activity of the human secretin-type GPCR. The expression vector or the activity of a human secretin-type GPCR. The expression vector or the reagent is useful in preparing a medicament for modulating the activity of a human secretin-type GPCR in a disease, such as a cativity of a human secretin-type GPCR in a disease, such as a cativity of a human secretin, adabetes, infection, fangula and protozoan), HIV (human immunodeficiency virus) infection, fungal and protozoan), HIV (human immunodeficiency virus) infection, and in a cancer, anorexia, bullind, asthma, Parkinson's disease, acute heart failure, hypotension, hypertension, urinary retention, osteoporosis, angina pectoris, myocardial infarction, urinary retention, osteoporosis, and in manic depression, delirium, dementia, mental retardation, dyskinesias, Huntington's disease and Tourette's syndrome). The present sequence represents a human secretin type GPCR of the invention
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human, chromosome mapping, gene mapping, gene therapy, forensic, food supplement, medical imaging, diagnostic, genetic disorder.
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100.0%; Pred. No. 89;
ive 0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Novel human diagnostic protein #9938.
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23-AUG-2000; 2000US-00649167.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity
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in diagnostics as expressed sequence tags for identifying expressed

genes. (I) is useful in gene therapy techniques to restore normal
activity of (II) or to treat disease states involving (II). (II) is
useful for generating antibodies against it, detecting or quantitating a
polypeptide in tissue, as molecular weight markers and as a food
supplement. (II) and its binding partners are useful in medical imaging
of supplement. (II) and (II) are useful for treating disorders
involving aberrant protein expression or biological activity. The
polypeptide and polymucleotide sequences have applications in
diagnostics, forenists, gene mapping, identification of mutentions
responsible for genetic disorders or other traits to assess biodiversity
and to produce other types of data and products dependent on DNA and
amino acid sequences. ABG00010-ABG30377 represent novel human diagnostic
amino acid sequences of the invention. Note: The sequence data for this
patent did not appear in the printed specification, but was obtained in
electronic format directly from WIPO at
the produce of sequences of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the convention of the conventi
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, Gandhi AR, Walia NK, Arvizu C, Elliott VS, Hafalia AJA;
, Pel J, Tang YT, Yue H, Reddy R, Butford N, Lu DAM;
Khan FA, Walsh FT, Ison CH, Richardson TW, Griffin JA;
Yang J, Lee EA, Harland L;
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23-FEB-2001; 2001US-0271215P.
08-MAR-2001; 2001US-0274551P.
23-MAR-2001; 2001US-0278507P.
30-MAR-2001; 2001US-0280597P.
02-APR-2001; 2001US-0280597P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6; Conservative
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WFLRHP 161
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N-PSDB; AAF88581.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 904 AA;
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Kallick DA,
Ramkumar J,
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                                                                                                                                   This invention describes novel polypeptides which have anti-HIV, antilateriosclerctic, cytostatic, neuroprotective, antiparkinsonian, hepatotropic, laxative, cerebroprotective, antilatmametory, virucide, antibacterial, fungicide and protozoacide activity. The products of the invention are useful for treating a disease or condition associated with decreased expression or over expression of functional g-protein coupled receptors (GCREC), while antibodies generated against the polypeptide of with the expression of GCREC e.g. arteriosclerosis, cirrhosis, cancer, stroke, Alahaimer's disease, Parkinson's disease, Constipation, AIDS, or bacterial, viral, fungal or protozoal infections. The compounds described in the invention can be used for gene therapy. AAB71322-AAB71369 represent the GCREC proteins encoded by AAF8850-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Cytostatic; antinflammatory; hepatotropic; nephrotropic; dermatological; antiarthritic; antiasthmatic; antidiabetic; hypotensive; antiulcer; antilipendic; antiarteriosoflerotic; nootropic; neuroprotective; anorectic; immunomodulator; uropathic; antinfertility; G-protein coupled receptor; GPCR, GPCR, BS; GPCR, BS; GPCR, BS; GPCR, BS; GPCR, BS; GPCR, BS; GPCR, BS; GPCR, BS; GPCR, BS; GPCR, BS; GPCR, BS; GPCR, BS; GPCR, BS; GPCR, BS; GPCR, BS; Hepatitis; nephritis; dermatitis; pancreatitis; rheumatoid arthritis; pastematitis; asthma; diabetes; hypertension; inflammatory bowel disease; gastric ulcer; arteriosolerosis; hyperlipemia; Alzheimer's disease; dementia; obesity; pulmonary fibrosis; renal fibrosis; immune deficiency; infertility; urinary blockage; cancer.
New human G-protein coupled receptors (GCREC), useful for diagnosing or treating a disease or condition associated with decreased expression or over expression of functional GCRECs e.g. cancer, Alzheimer's and
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     66.7%; Score 6; DB 5
100.0%; Pred. No. 98;
ive 0; Mismatches
                                                                                                   Claim 63; Page 160-163; 239pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADE34415 standard; protein; 953 AA.
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14-MAY-2002; 2002JP-00138013.
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 924 AA;
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proteins

encoding the same. The novel GPCR (NGPCR) proteins standard recombinant methodology. The NGPCR protein

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New polypeptide, useful for generation of antibodies and for screening compounds for treatment of mental, biological or medical disorders and diseases, comprises the isolated G coupled protein receptor polypeptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                     The invention provides novel G coupled protein receptor (GPCR) proteins
                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 8; Page 78-80; 85pp; English
                                                                                                                                                                                                                                                                                                                                                         (LEXI-) LEXICON GENETICS INC.
                                                                                                                                                                                                                                                                                                                                                                     Nepomnichy B,
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                                                                                                                                             Sequence 953 AA;
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                                                                                                                                                                                                                                                                                         Homo sapiens
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The invention relates to G-protein coupled receptor proteins of human crigin. These proteins include GPCR185, GPCR187, GPCR187, GPCR189, GPCR189, GPCR189, GPCR189, GPCR189, GPCR189, GPCR189, GPCR22 and GPGR223. Proteins of the invention are used in the treatment and prevention of diseases associated with inflammation. Creatment and prevention of diseases associated with inflammation, angiogenesis and tissue neogenesis, including hepatitis, nephritis, dermatitis, pancreatitis, rheumatoid arthritis, osteoarthritis, atopic dermatitis, asthma, diabetes, hyperlipemia, Alzheimer's disease, dementia, obesity, pulmonary fibrosis, renal fibrosis, immune deficiency, infertility, urinary blockage and cancer (such as cancer of the brain, neck, tongue, lung, breast, pancreas, stomach, colon, duodenum, prostate, bladder, ovary, womb or rectum). Primers of the invention are devised and synthesised based on G-protein coupled receptor consensus sequences and used for 5'-RACE (rapid amplification of cDNA ends) and 3'-RACE amplification of human cDNA derived from adrenal and visual cortex RNA. Sequences given in ADE34531-ADE34533 represent human G-protein coupled creeptor proteins, genes encoding them, and primers for the amplification ö treatment and diagnosis of cancer, inflammatory and G coupled protein receptor; GPCR; NGPCR; cytostatic; anorectic; cancer; antiinflammatory; immunosuppressive; antidiabetic; human. Gaps ö Length 953; 66.7%; Score 6; DB 7; Length 953; 100.0%; Pred. No. 1e+02; tive 0; Mismatches 0; Indels Example; SEQ ID NO 35; 274pp; Japanese ABB07252 standard; protein; 994 AA. Human novel GPCR (NGPCR) protein. 11-MAY-2001; 2001WO-US015048 12-MAY-2000; 2000US-0203875P. 30-MAY-2000; 2000US-0207932P. recognizing them for treatr gastrointestinal disorders 26-MAR-2002 (first entry) Best Local Similarity 100. Matches 6, Conservative 141 WFLRHP 146 of these sequences. 4 WFLRHP 9

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                             and polymucleotides are useful for diagnosis, in treatment of diseases, or behavioural disorders, for treatment of mutant grows or behavioural disorders, for the diagnosis in treatment of physiological or behavioural disorders, for the diagnosis of disease, and for inappropriately expressed GPCRX for the diagnosis of disease, and for phenotypic manifestations of perturbing the normal function of GPCR in the body. The NGPCR proteins are useful for the generation of antibodies, as reagents in diagnostic assays, for the identification of other cellular gene products related to a GPCR, as reagents in assays for screening compounds that can be used as pharmaceutical reagents for the therapeutic treatment of mental, biological or medical disorders and diseases, and for identifying compounds useful in the therapeutic treatment of obesity, inflammation, immune disorders, diabetes, heart and coronary disease, metabolic disorders, and cancer. The present sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human; G protein-coupled; receptor; hTGR21; central nervous disease; endocrine disease; metabolic disease; cancer; inflammation; nootropic; circulatory disorder; respiratory disorder; digestive disorder; immune system disorder; infection; gene therapy; neuroprotective; antiinflammatory; lammonomodulator; cardiant; antimicrobial; cytostatic; gene therapy; hTGR21-1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                encoding DNA, for developing drugs to treat e.g. central nervous diseases, endocrine diseases, inflammations and diseases of digestive
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No. 16+02;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAU99808 standard; protein; 994 AA.
                                                                                                                                                                                                                                                                                represents a human NGPCR protein
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13-APR-2001; 2001JP-00115916.
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Best Local Similarity luv...
6; Conservative
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                                                                                                                                                                                                                                                                                                                   Sequence 994 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Miwa M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 10
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Turner CA;

Gerhardt B,

Walke DW,

Wang X,

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The invention relates to G-protein coupled receptor proteins of human origin. These proteins include GPCR185, GPCR187, GPCR189, GPCR189, GPCR189, GPCR189, GPCR189, GPCR223. Proteins of the invention are used in the treatment and prevention of diseases associated with inflammation, anglogenesis and tissue neogenesis, including hepatitis, nephritis, dermatitis, pancreatitis, rheumacoid arthritis, osteoarthritis, atopic dermatitis; athma, diabetes, hypertension, inflammatory bowel disease, gastric ulcer, arteriosclerosis, hyperlipemia, Alzheimer's disease, dementia, obesity, pulmonary fibrosis, renal fibrosis, immune deficiency,
screened compounds are useful for developing drugs to treat central nervous diseases, endocrine diseases, metabolic diseases, cancer, inflammations, and diseases of the circulatory, respiratory, digestive and immune systems, and infections, and in gene therapy. This is the amino acid sequence of the human G protein-coupled receptor hTGR21-1, a novel protein isolated from human kidney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                G-protein coupled receptor proteins, genes encoding them and antibodies recognizing them for treatment and diagnosis of cancer, inflammatory and
                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                     ö
                                                                                                                                                                        66.7%; Score 6; DB 5; Length 994; 100.0%; Pred. No. 1e+02; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human G-protein coupled receptor protein #SEQ ID 45.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 1; SEQ ID NO 45; 274pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                           ADE34425 standard; protein; 994 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14-MAY-2002; 2002JP-00138013.
28-FEB-2003; 2003JP-00054663.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14-MAR-2003; 2003WO-JP003050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IS-MAR-2002; 2002JP-00071567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gastrointestinal disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                        Query Match
Best Local Similarity 100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (NISB ) JAPAN TOBACCO INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Watanabe H, Nozaki Y;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2003-722435/68.
                                                                                                                                                                                                                                                                                          WFLRHP 194
                                                                                                                                                                                                                                                     4 WFLRHP 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N-PSDB; ADE34424.
                                                                                                                                      Sequence 994 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                  ADE34425;
                                                                                                                                                                                                                                                                                            189
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Transgenic mouse; neurological disorder; adrenal gland disorder;

W transgenic mouse; neurological disorder; adrenal gland disorder;

w colon disorder; intestinal disorder; adrenal gland disorder;

w colon disorder; blood disorder; immune disorder; bone disorder;

joint disorder; metabolic disorder; mutritive disorder; cancer;

w kidney disorder; uterus disorder; nutritive disorder; cancer;

w vory disorder; uterus disorder; prostate disorder; testis disorder;

w vory disorder; thyroid disorder; pancreas disorder; spleen disorder;

w thymus disorder; thyroid disorder; antimarkineonian; antimanic;

w cytostatic; antihilammatory; vasotropic; antidiarrhoteic; antidiabetic;

w vircide; hepatotropic; antibacterial; antiannemic;

w vircide; hepatotropic; antibacterial; antiannemic;

w immunosuppressive; nephrotropic; gene therapy; GPCR modulator; human;
infertility, urinary blockage and cancer (such as cancer of the brain, neck, tongue, lung, breast, pancreas, stomach, colon, duodenum, prostate, bladder, voxry, womb or rectum). Primers of the invention are devised and synthesised based on G-protein coupled receptor consensus sequences and used for S'-RACE (rapid amplification of cDNA ends) and 3'-RACE amplification of cDNA ends) and 3'-RACE Sequences given in ADE34534-ADE34533 represent human G-protein coupled receptor proteins, genes encoding them, and primers for the amplification of these sequences.
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                                                                                                                                                                                                                                                               Gaps
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                                                                                                                                                                                                                         66.7%; Score 6; DB 7; Length 994; 100.0%; Pred. No. 1e+02; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hohmann J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JE, Gragerov A, Hohmann J,
Pavlova MN, Vassilatis D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 1; SEQ ID NO 76; 542pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human novel GPCR PGR23, SEQ ID NO:76.
                                                                                                                                                                                                                                                                                                                                                                                                                               ADO28977 standard; protein; 994 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   pectoris, Parkinson's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bergmann JE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      09-SEP-2003; 2003WO-US028226.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          09-SEP-2002; 2002US-0409303P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                 6; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2004-390329/36.
                                                                                                                                                                                                                                                                                                                                   189 WFLRHP 194
                                                                                                                                                                                                                         Query Match
Best Local Similarity
Matches 6; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (PRIM-) PRIMAL INC.
                                                                                                                                                                                                                                                                                                 4 WFLRHP 9
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                                                                                                                                                                                        Sequence 994 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO20040400000-A2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AD028977;
                                                                                                                                                                                                                                                                                                                                                                                            RESULT 12
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N-PSDB; ADQ25891
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The invention relates to human and mouse G protein-coupled receptors (GPCRs) and nucleic acids encoding them. The invention also relates to sequences at least 90% identical to the GPCR proteins and nucleic acids of the inventing or diagnosing diseases associated with GPCRs of the inventing preventing or diagnosing diseases.

CC compounds useful in the treatment of GPCR-related diseases, a transgenic compounds useful in the treatment of GPCR-related diseases, a transgenic mouse comprising a GPCR transgene or in an endogenous GPCR gene; cells derived from the trasngenic mice; kits comprising several mice, each of which has a mutation in a GPCR transgene or in an endogenous GPCR gene; cells derived from the trasngenic mice; kits comprising several mice, each of which has a mutation in a different GPCR polymolecides of the invention. The envertion is a wide variety of probes which hybridise to GPCR polymolecides of the invention. The envertion is a wide variety of invention further discloses variants of the GPCR polymolecides of wide variety of invention further discloses variants of the GPCR polymolecides of the invention. The discorders of the adrensional disorders (e.g., Alzheimer's disease, depression, diabetic neuropathy, Parkinson's disease or schizophrenia); disorders of the adrenal gland; disorders of the color or infraction) muscular disorders of the color or infracting enveryment of disorders (e.g., augina, cardiac arrhythmia or mycomedicial miscrelars (e.g., augina, remained or leukaemia); immune disorders (e.g., augina, remained or leukaemia); immune disorders (e.g., augina, remained or leukaemia); immune disorders (e.g., augina, remained or leukaemia); immune disorders (e.g., augina, remained disorders of the kidney, liver, lung, breast, obesity, enzyme deficiency-related diseases or vitamin deficiency-related diseases); and disorders of the kidney, liver, lung, breast, thymus and chinted specification, those sequences not shown were obtained in thy without long the printed specification the sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  receptor; GPCR; guanosine triphosphate-binding protein-coupled receptor;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human guanosine triphosphate-binding protein-coupled receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 66.7%; Score 6; DB 8; Length 994; 100.0%; Pred. No. 1e+02; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (NAAD-) NAT INST ADVANCED IND SCI & TECHNOLOGY. (ADSC-) CENT ADVANCED SCI & TECHNOLOGY INCUBATIO.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADQ25892 standard; protein; 994 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18-DEC-2002; 2002JP-00366417.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   66.78;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity 100.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 994 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADQ25892;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    human.
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                                                                                                                                                             The present invention provides the protein and coding sequences of a human guanosine triphosphate-binding protein-coupled receptor (GPCR). The sequences are useful for treating diseases related to the abnormality of the expression of GPCR, and for developing a therapeutic agent for medical treatment. The present sequence is the protein of the invention.
New polynucleotide encoding guanosine triphosphate-binding protein-
coupled receptor, for use in developing a therapeutic agent for medical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human; G-protein coupled receptor; GCREC; olfactory; taste sensation; cell proliferative disorder; actinic keratosis; leukaemia; metabolic; epilepsy; Alzheimer's disease; cardiovascular; hypertension, virucide; angina pectoris; myocardial infarction; gastrointestinal; anorexia; cholecystitis; Crohn's disease; inflammatory; hypotensive; cardiant; acquired immune deficiency syndrome; anaemia; asthma; hepatotropic; diabetes; obesity; infection; transgenic; gene therapy; cytostatic; anticonvulsant; neuroprotective; antiinflammatory; neurological; nootropic; ancectic; autoimmune; receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Lu Y, Ding L;
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/note= "Latrophilin/CL-1-like GPS domain"
                                                                                                                                                                                                                                                                                                                                                                                       Length 994;
                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         17. .1018
/note= "Human mature GCREC-1 protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               'note= "Human mature GCREC-1 protein"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human G-protein coupled receptor (GCREC) -1 protein.
                                                                                                                                                                                                                                                                                                                                                                                  66.7%; Score 6; DB 8; L. 100.0%; Pred. No. 1e+02; ive 0; Mismatches 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 . .27
|abel= Signal_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        . .16
|Tabel= Signal_peptide
                                                                                                          Claim 1; SEQ ID NO 20; 104pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAE25061 standard; protein; 1018 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Baughn MR, Lu DAM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   05-DEC-2001; 2001WO-US046659.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (INCY-) INCYTE GENOMICS INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .1018
                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        189 WFLRHP 194
                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity
Matches 6; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4 WFLRHP 9
                                                                                                                                                                                                                                                                                                                                    Sequence 994 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30-OCT-2002
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                                                         treatment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAE25061;
                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Peptide
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Smolyar A;

Koehler RH,

(FARB) BAYER AG.

WPI; 2003-140623/13

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The invention relates to human G-protein coupled receptors (GCREC) and their corresponding nucleic acids. GCREC is useful in screening for compounds which acts as its agonist or antagonist and is also useful for preparing a polyclonal or monoclonal antibody. GCREC is useful for identifying a compound that modulates, mimics and/or blocks an olfactory and/or taste sensation. GCREC DNA is useful for assessing toxicity of a cest compound. GCREC and its DNA are useful in the diagnosis, treatment are test compound. GCREC and its DNA are useful in the diagnosis, treatment and prevention of a cell proliferative disorder e.g. actinic keratosis, and prevention of a cell proliferative disorder e.g. actinic keratosis, clienaemia, etc., a cardiovascular disorder e.g. appliepsy, Alzheimer's disease, etc., a cardiovascular disorder e.g. appliepsy, Alzheimer's concexia, cholecystitis, Crohn's disease, etc., an autoimmune/cinfimmancy disorder e.g. acquired immune deficiency syndrome, anaemia, asthma, etc., a metabolic disorder e.g. diabetes, obseity, etc., and an infection by a viral agent such as adenovirus, arenavirus, etc., dat an infection by a viral agent such as adenovirus, arenavirus, etc. GCREC DNA is used for creating knock out or knock in humanised animals or transgenic animals to model human diseases, and somatic or germine gene in human diseases, and somatic or germine equence in human general sequence in human diseases, and somatic or germine equence in human general sequence in human diseases, and somatic or germine equence in human diseases, and somatic or germine equence in human diseases, and somatic or germine equence in human diseases, and somatic or germine equence in human diseases, and somatic or germine equence in human diseases, and somatic or germine equence in human diseases.
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                                                                                                                      Novel isolated human G-protein coupled receptor protein useful for diagnosing, treating, preventing hypertension, myocardial infarction, anorexia, cholecystitis, anemia, asthma, diabetes, obesity, Alzheimer's
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5. 1.1e+02;
Gandhi AR, Thornton M;
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100.0%; Pred. No. 1.1
:ive 0; Mismatches
                                                                                                                                                                                                                                                   Claim 1; Page 117-120; 136pp; English
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20-MAR-2003 (first entry)
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1es 6; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   is human GCREC-1 protein
Tribouley CM, Tang YT,
                                                 WPI; 2002-519657/55
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                                                                        N-PSDB; AAD40625
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Matches
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The invertion relates to an isolated polynucleotide winch: (a) encodes a human secretin-type G protein-coupled receptor (GPCR) polypeptide; (b) comprises a sequence appearing as ABX15278 and ABX15279; (c) hybridises a sequence appearing as ABX15278 and ABX15279; (c) hybridises a sequence deviating from (A) - (C) due to the degeneration of the genetic code; or represents a fragment, derivative or allelic variation of (A) - (C). Also included are an expression vector containing the above code; or represents a fragment, derivative or allelic variation of (A) - (C). Also included are an expression vector containing the above code; or sequentially purified human secretin-type GPCR polypeptide, methods of reducing the activity of the human secretin-type GPCR, wethods of reducing the activity of the human secretin-type GPCR, the identified modulators, The polymucleotide is secretin-type GPCR, the identified modulators, The polymucleotide with human secretin-type GPCR dysfunction. The polymucleotide may also be used as hybridisation probes or primers, and in diagnostic assays or in genetic testing. The methods are useful in producing and detecting the polymucleotide and polypeptide and in screening for agents that modulate code the activity of the human secretin-type GPCR. The expression vector or the reagent is useful in preparing a medicament for modulating the cotivity of the human secretin-type GPCR. The expression vector or the reagent is useful in preparing a medicament for modulating the cotivity of a human secretin-type GPCR in a disease, such as a cativity of a memory and an immunodeficiency virus) infection, fungal and protozoan), HIV (human immunodeficiency virus) infection, cativity of a morexia bullina, asthma, parkinson's disease, acute heart cfailure, hypotension, hypertension, urinary retention, osteoporosis, angina pectoris, morexia, bulnima, asthma, parkinson's disease, acute as a cativity of any manic depression, urinary retention, osteoporosis, angina pectoris, municatoris, municatoris, municatoris,
                                                                                                                                                                                       New isolated polynucleotide encoding human secretin-type G protein-coupled receptor (GPCR) polypeptides, useful for preventing or treating diseases associated with GPCR dysfunction, e.g. cardiovascular disease or
                                                                                                                                                                                                                                                                                                                                                                invention relates to an isolated polynucleotide which: (a) encodes a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
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                                                                                                                                                                                                                                                                                                           Claim 1; Fig 2; 127pp; English.
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Matches 6, Conservative
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                                                                                                                                                                                                                                                                   diabetes.
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                                                                                                                                                                                                                                                                                                                                                                                       New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits and to assess biodiversity.
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100.0%; Pred. No. 1.2
ive 0; Mismatches
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                                                                                                                                                                                                                                                  Tang YT;
                                                   30-MAR-2001, 2001WO-US008631
                                                                                                          31-MAR-2000; 2000US-00540217.
23-AUG-2000; 2000US-00649167.
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nes 6; Conservative
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  11-OCT-2001
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ADF70474
ID ADF70474
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bioinformatics; blood; serum; plasma protein; protein detection; mass spectroscopy; proteomics; glycosylation; diagnosis; cancer; cytostatic; diabetes; antidiabetic; inflammation; antinflammatory; rheumatoid arthritis; antiarthritis; antirheumatic; psychiatric disorder; neuroleptic; neurological disease; infection; antimicrobial.
                                                                                                                                                                                                                                                                    Transformation of cells with a fusion protein of an orphan receptor
protein with a fluorescent protein useful for identification of ligands
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                                                                                                                                                               Hosoya M;
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                                                                                                                                                                 Kawamata Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human serum N-linked glycopeptide SEQ ID NO: 1238.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          66.7%; Score 6; DB 7; Ler
100.0%; Pred. No. 1.2e+02;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                    Disclosure; SEQ ID NO 97; 594pp; Japanese.
                                                                                                                                                               Ogi K, Komatsu H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AEE37134 standard; peptide; 28 AA.
                                22-FEB-2002; 2002JP-00045728.
23-JUL-2002; 2002JP-00213949.
11-OCT-2002; 2002JP-00298237.
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21-FEB-2003; 2003WO-JP001901.
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                                                                                                                        (TAKE ) TAKEDA CHEM IND LTD
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Best Local Similarity 100.
                                                                                                                                                                                                                                                                                                               to the orphan receptor.
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                                                                                                                                                                 Hinuma S, Fujii R,
                                                                                                                                                                                                      WPI; 2003-697654/66.
N-PSDB; ADF70576.
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2000US-0217496P.
2000US-0218290P.
2000US-0220963P.
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2000US-0233063P
2000US-0233065P
2000US-0233065P
2000US-023423P
2000US-0234234P
2000US-0234234P
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2000US-0232080P.
2000US-0232081P.
2000US-0231968P.
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2000US-0232398P.
2000US-0232399P.
2000US-0232400P.
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2000US-0224518P
2000US-0224519P
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2000US-0235484P.
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2000US-0239937P.
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      The invention relates to identifying glycopolypeptides in a serum or plasma sample comprising immobilizing derivatized sample glycopolypeptides to a solid support, releasing the sample glycopetide (a solid support, adding to the released sample fragments standard peptides, and identifying released sample glycopeptide fragments that correspond to the released sample glycopeptide fragments that correspond to standard peptides added by mass spectroscopy. Also included are a method for identifying one or more diagnostic markers for a disease, a composition comprising peptides correspond to peptide fragments derived by cleavage of polypeptides correspond to peptide fragments derived by cleavage of polypeptides correspond to peptide fragments derived by cleavage of polypeptides correspond to peptide fragments derived by cleavage of polypeptides correspond to peptide fragments derived by cleavage of polypeptides correspond and a kit comprising peptides containing the glycosylation sites (AEE35897-AEE39378). The methods are useful for identify and grocein markers: It can also be used to identify and/or can be used for blood serum profiling for the detection of fragmostic and diagnostic protein markers: It can also be used to identify and/or can be used for protein abundance measurement of protein glycosylation on the concurrent correspond to protein abundance measurement of protein glycosylation on the cancurrent correspond an also be automated to facilitate the processing of multiple samples. The present sequence is a human glycopeptide comprising an N-enthod of the invention.
Identifying glycopolypeptides in a serum or plasma sample, by identifying released sample glycopeptide fragments that correspond to standard
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          55.6%; Score 5; DB 10; Length 28; 100.0%; Pred. No. 72; tive 0; Mismatches 0; Indels
                                                         Claim 1; SEQ ID NO 1238; 193pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Novel human respiratory antigen #85.
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2000US-0180628P.
2000US-0184664P.
2000US-0186350P.
2000US-0189874P.
2000US-0199076P.
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Best Local Similarity
Local 5; Conserve
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FLRHP 18
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02-MAR-2000;
16-MAR-2000;
17-MAR-2000;
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04-FEB-2000;
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                              peptides.
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셤 Š

preventing, treating and/or prognosing disorders related to the respiratory system including throat disorders (e.g. vocal cord paralysis, tonsillitis, and laryngitis), lung disorders e.g. pneumonia, allergic disorders e.g. pneumonia, allergic disorders e.g. pneumonia, allergic disorders a.g. asthma, pleurisy, cystic fibrosis, emphysema, nose polynucleotide sequences of the respiratory tissues e.g. lung cancer. The antisense therapy. AMUT685-AM117975 represent novel human respiratory antisense therapy and antisense therapy and for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences

889999999998888

polypeptides. The sequences of the invention are useful for

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Gaps

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0; Indels Length 34;

DB 4;

55.6%; Score 5; DB 4 100.0%; Pred. No. 85; ive 0; Mismatches

Similarity 100 5; Conservative

Query Match Best Local S: Matches 5,

Sequence 34 AA;

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Isolated polypeptide for treating, preventing and/ or prognosing disorders related to the respiratory system including respiratory cancers and also for testing and detection e.g. diagnosis.
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                                                                                                                                                                          08-NOV-2000; 2000US-0246523P

08-NOV-2000; 2000US-0246524P

08-NOV-2000; 2000US-0246526P

08-NOV-2000; 2000US-0246526P

08-NOV-2000; 2000US-0246527P

08-NOV-2000; 2000US-0246527P

08-NOV-2000; 2000US-0246532P

08-NOV-2000; 2000US-0246610P

08-NOV-2000; 2000US-0246611P

17-NOV-2000; 2000US-0246611P

17-NOV-2000; 2000US-0246611P

17-NOV-2000; 2000US-0249208P

17-NOV-2000; 2000US-0249208P

17-NOV-2000; 2000US-0249210P

17-NOV-2000; 2000US-0249210P

17-NOV-2000; 2000US-0249210P

17-NOV-2000; 2000US-0249211P
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17-NOV-2000; 2000US-0249214P.

17-NOV-2000; 2000US-0249216P.

17-NOV-2000; 2000US-0249216P.

17-NOV-2000; 2000US-0249216P.

17-NOV-2000; 2000US-024924P.

17-NOV-2000; 2000US-024924P.

17-NOV-2000; 2000US-024926P.

17-NOV-2000; 2000US-024926P.

17-NOV-2000; 2000US-024926P.

17-NOV-2000; 2000US-024929P.

17-NOV-2000; 2000US-024929P.

17-NOV-2000; 2000US-024929P.

17-NOV-2000; 2000US-024930P.

10-DEC-2000; 2000US-025931P.

01-DEC-2000; 2000US-025931P.

05-DEC-2000; 2000US-025931P.

05-DEC-2000; 2000US-025198P.
                                                 2000US-0241787P.
2000US-0241808P.
2000US-0241809P.
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2000US-0244617P.
2000US-0246474P.
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2000US-0246477P.
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06-DEC-2000; 2000US-0251479P
08-DEC-2000; 2000US-0251856P
08-DEC-2000; 2000US-0251868P
                                     2000US-0241786P.
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08-DEC-2000; 2000US-0251989P
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          20-OCT-2000;
20-OCT-2000;
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01-NOV-2000;
08-NOV-2000;
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respiratory system antigen;
human respiratory system associated polynuclectide;
respiratory system disorder; throat disorder; vocal cord paralysis;
respiratory system disorder; throat disorder; vocal cord paralysis;
tonsillitis; laryngitis; lung disorder; pneumonia; allergic disorder;
asthma; eosinophilic pneumonia; pleurisy; cystic fibrosis; emphysema;
histiccytosis; sarcoidosis; nose disorder; rhinitis; sinusitis; neoplasm;
cancer; respiratory tissue cancer; throat cancer; lung cancer;
cancer of the nose; gene therapy; chromosome identification; forensic;
human respiratory system associated protein; human.
                                                                                                                                    antiinflammatory; antiallergic; antiasthmatic; cytostatic; gene therapy;
                                                                                                          Human respiratory system associated protein seg id 387
                           ADG41149 standard; protein; 34 AA.
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2000US-0205515P.
2000US-0209467P.
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2000US-0186350P.
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2000US-0215135P.
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2000US-0225213P.
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                                                                                26-FEB-2004 (first entry)
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02-MAR-2000;
16-MAR-2000;
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14-AUG-2000;
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                                                        ADG41149;
RESULT 20
                 ADG41149
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The present invention relates to the isolation of novel human respiratory antigens, and cDNA (AAS27869-AAS28159) and genomic sequences encoding for

Claim 11; SED ID No 387; 546pp; English.

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14. SEP-2000; 2000US-0233055P.
21-SEP-2000; 2000US-0234223P.
25-SEP-2000; 2000US-023493P.
25-SEP-2000; 2000US-023499P.
25-SEP-2000; 2000US-02359BP.
27-SEP-2000; 2000US-02358BP.
27-SEP-2000; 2000US-02358BP.
29-SEP-2000; 2000US-0235B3P.
29-SEP-2000; 2000US-0235B3P.
29-SEP-2000; 2000US-0235B3P.
29-SEP-2000; 2000US-023636P.
29-SEP-2000; 2000US-023636P.
29-SEP-2000; 2000US-023636P.
29-SEP-2000; 2000US-023636P.
29-SEP-2000; 2000US-023636P.
29-CCT-2000; 2000US-023636P.
29-CCT-2000; 2000US-023703P.
20-CCT-2000; 2000US-023703P.
20-CCT-2000; 2000US-023703P.
20-CCT-2000; 2000US-023703P.
20-CCT-2000; 2000US-023178FP.
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20-CCT-2000; 2000US-024178FP.
20-CCT-2000; 2000US-024178FP.
20-CCT-2000; 2000US-024186P.
20-CCT-2000; 2000US-024186P.
20-CCT-2000; 2000US-024186P.
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20-CCT-2000; 2000US-024186P.
20-CCT-2000; 2000US-024186P.
20-CCT-2000; 2000US-024186P.
20-CCT-2000; 2000US-024186P.
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08-SEP-2000; 2000US-0231244P.
08-SEP-2000; 2000US-0231414P.
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12-SEP-2000; 2000US-023239P.
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2000US-022575P
2000US-0226279P
2000US-0226279P
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2000US-0229344P
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2000US-0229513P
2000US-02304337P
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2000US-0228924P.
2000US-0229287P.
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2000US-0246523P
14-AUG-2000; 2
14-AUG-2000; 2
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HUMAN GENOME SCI INC. (HUMA-) Rosen CA, Ruben SM, Barash

WPI; 2003-902033/82. N-PSDB; ADG40857.

Novel respiratory system antigen and polynucleotides encoding the polypeptides, useful for treating diagnosing, treating or preventing tonsillitis, pneumonia, asthma and cystic fibrosis, emphysema, throat cancer.

Claim 11; SEQ ID NO 387; 236pp; English

The invention describes an isolated polypeptide (I) comprising an amino acid sequence that is at least 90% identical to polypeptide fragment of any one of 299 respiratory system antigen sequences (PS) and having biological activity, polypeptide domain or epitope of PS, full-length protein of PS, or variant, allelic variant or species homolog of PS (I) or a polymucleotide (II) encoding (I) is also useful for diagnosing a pathological condition or a susceptibility to a pathological condition or a susceptibility to a pathological condition in (II) or determining the presence or absence of mutation in (II) or determining the presence or amount of expression of (I) in a biological sample and diagnosing a pathological condition based on the result. The human respiratory system associated polynucleotides, the polypeptides encoded by them, and antibodies that immunospecifically bind these polypeptides are useful in diagnosis, treatment, prevention and/or prognosis of disorders of respiratory system such as throat disorders

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2000US-0229344P
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(e.g., vocal cord paralysis, tonsillitis, and laryngitis), lung disorders (e.g., pneumonia), allergic disorders, (e.g., asthma and eosinophilic pneumonia), pleurisy, cystic fibrosis, emphysema, histiocytosis, sarcoidosis, nose disorders (rhinitis and sinusitis), neoplasms and/or cancers of respiratory tissues (e.g., throat cancer, lung cancer, and cancer of the nose). The polynucleotides are useful in gene therapy
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Best Local Similarity 100.0%; Pred. No. 85;
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24-FEB-2000; 2000US-01806464P.
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19-MAY-2000; 2000US-019123P.
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11-JUL-2000; 2000US-0217496P.
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Human; genetic disorder; gene mapping; medical imaging; cancer; neurodegenerative disorder; lymphoid cell disorder; osteoporosis; Parkinson's disease; Alzheimer's disease; bone degenerative disorder; osteoarthritis; periodontal disease; liver fibrosis; viral infection; fungal infection; bacterial infection; autoimmune disease; diabetes; atopic dermatitis.

polypeptide #76

(first entry)

17-JAN-2003 Human novel

ABG99963 standard; protein; 52 AA

ABG99963

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This invention is related to a novel isolated polypeptide, which comprises a human respiratory system-related polypeptide, and the DNA sequence which encodes it. The invention may be useful for the development of compounds with an antiasthmatic, antibacterial, antiinflammatory, cytostatic, antianaemic or antiallergic activity. In addition, the sequences disclosed may be useful for gene therapy. The polypeptide or polymuclectide is useful for treating, preventing or memical condition, for example pneumonia, lung cancer, cystic fibrosis, asthma, sarcoidosis, thinitis, anaemia, leukaemia, inflammations, sinusitis, chronic observative pulmonary disease or disgnosing any of these diseases or a susceptibility to the disease. The polypeptide or polymuclectide is also useful for disgnosing any of these diseases or a susceptibility to the disease. The polypeptide of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New human respiratory system-related polypeptide and genes, useful for treating, preventing or diagnosing e.g. pneumonia, lung cancer, cystic fibrosis, asthma, sarcoidosis, rhinitis, leukemia, inflammations or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            55.6%; Score 5; DB 7; Length 34; 100.0%; Pred. No. 85; tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 11; SEQ ID NO 387; 202pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rosen CA, Ruben SM, Barash SC;
                                                          17-NOV-2000; 2000US-0249213F.
17-NOV-2000; 2000US-0249214F.
17-NOV-2000; 2000US-0249215F.
17-NOV-2000; 2000US-0249216F.
                                                                                                                                        2000US-0249218P.
2000US-0249244P.
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2000US-0249299P
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (HUMA-) HUMAN GENOME SCI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2001US-00764860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2003-765403/72.
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Best Local Similarity
Matches 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N-PSDB; ADI96631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 34 AA;
                                                                                                                                                                       17-NOV-2000;
                                                                                                                                                                                                                   17-NOV-2000;
17-NOV-2000;
                                                                                                                                                       17-NOV-2000;
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New isolated polypeptides and polynucleotides, useful for preventing, treating or ameliorating medical conditions, such as cancer, neurodegenerative disorders, lymphoid cell disorders, bone degenerative

Claim 9; SEQ ID NO 602; 235pp; English.

disorders, and infections.

Zhang J, Zhao QA, Ren F; R, Wang Z, Ghosh M;

X, Asundi V, Z
zaki V, Chen F
Drmanac RT;

Yamazaki V,

Y, Yamaz Wang·D,

Ма

Yang Y, Ma T, Wang J,

Wehrman T, rang YT, Xue AJ,

WPI; 2003-040556/03

N-PSDB; ABX05061

Goodrich

Zhou P,

(HYSE-) HYSEQ INC.

14-MAR-2002; 2002WO-US005109. 15-MAR-2001; 2001US-00810173

WO200274961-A1.

26-SEP-2002

Homo sapiens

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The invention relates to human polynucleotides and the polypeptides they encode. The polynucleotides and polypeptides are useful in diagnostics, forenaises, gene mapping, medical imaging, identification of mutations responsible for genetic disorders or other traits, assessing biodiversity and producing many other types of data and products dependent on DNA and amno acid sequences. They are also useful for preventing, treating or amino acid sequences. They are also useful for preventing or amino acid sequences. They are also useful for preventing or disorders (e.g. Parkinson's disease, Alzheimer's disease), lymphoid cell disorders (e.g. Parkinson's disease, Alzheimer's disease), lymphoid cell disorders, osteoporosis, osteoarthritis, bone degenerative disorders, periodontal diseases (e.g. diabetes, atopic dermatitis).

Sequences ABG99888-ABG9988 and ABU00010-ABU00433 represent human contropersore of the invention. Note: The sequence data for this patent is not represented in the printed specification but is based on sequence information supplied by the European Patent Office
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
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요.
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AAU42843 standard; protein; 60 AA.

RESULT 23 AAU42843 ID AAU4 XX

Gaps

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0; Indels

Conservative

WFLRH 32 WFLRH 8

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RESULT 22

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Sequences AAU39105-AAU68017 represent Propionibacterium acnes immunogenic polypeptides. The proteins and their associated DNA sequences are used in the treatment, prevention and diagnosis of medical conditions caused by e. acnes. The disorders include SAPHO syndrome (synovitis, acne, practice) and placed and osteomyelitis), uveitis and endophthalmitis. P. acnes is also involved in infections of bone, joints and the central nervous system, however it is particularly involved in the inflammatory lesions associated with acne vulgaria. A method for detecting the presence or absence of P. acnes in a patient comprises contacting a manger be amount of bound protein in the sample. The polypeptides may be used as antigens in the production of antibodies specific for P. acnes proteins. These antibodies can be used to demregulate expression and activity of P. acnes polypeptides and therefore treat P. acnes infections. The antibodies may also be used as diagnostic agents for determining P. acnes presence, for example, by cingmostic agents for determining P. acnes presence, for example, by chis patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at
                                                                                                                                                                                                          SAPHO syndrome; synovitis; acne; pustulosis; hypertosis; osteomyelitis; uveitis; endophthalmitis; bone; joint, central nervous system; ELISA; inflammatory lesion; acne vulgaris; enzyme linked immunosorbent assay; dermatological; osteopathic; neuroprotectant.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Propionibacterium acnes polypeptides and nucleic acids useful for vaccinating against and diagnosing infections, especially useful for
                                                                                                                                         Propionibacterium acnes immunogenic protein #3739.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 keiky YAW, Persing DH, Mitcham JL, Wang SS, maisonneuve J, Zhang Y, Jen S, Carter D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Example 1; SEQ ID NO 4038; 1069pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        21-APR-2000; 2000US-0199047P.
02-JUN-2000; 2000US-0208841P.
07-JUL-2000; 2000US-0216747P.
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                                                                    27-FEB-2002 (first entry)
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Best Local Similarity 100...
5; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-NOV-2001.
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AAU42843;
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Bhatia A;

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The invention relates to an isolated polymucleotide (ACF64435-ACF64733)

Concoding a Propionibacterium acnes protein. The invention also relates to polypeptides encoded by the polymucleotides (ABM35624-ABM64536) and to immunogenic fragments of P. acnes polypeptides. The invention additionally encompasses expression vectors and host cells comprising a additionally encompasses expression vectors and host cells comprising a collymetrion, fusion proteins comprising a polymetrion of the invention; an erbod for stimulating an immune response specific for a P. acnes to polymucleotides, and an isolated T cell population comprising T cells prepared via this method, a vaccine composition (comprising P. acnes polypeptides, polymetriolectides, antibodies, fusion proteins, T cell populations, or antigen-presenting cells that express the polymetriolectides, and an extend for inhibiting the development of P. acnes in a consider that express the polypeptides, polymetrioles, in a method for inhibiting the development of P. acnes in a conteins, T cell populations or antigen-presenting cells that express the colypeptides are useful for diagnosing, preventing or treating acnes to polypeptides are useful for diagnosing, preventing or treating acnes contoucied acid hybridasation. The vaccine composition is useful for the stimulating an immune response specific for a P. acnes for nucleic acid hybridasation. The vaccine composition is useful for the stimulating and immune response against P. acnes, or for treating acnes and the kit is useful for performing a diagnostic assay. The present of sequence represents a polypeptide present or reading very many or an immune for the polymetric assay. The present of sequence represents a polypeptide present or and the polymetric and present or a polymetric and the polymetric and present or an account of an immune response against P. acnes, or for treating account of an immune response applymentation be encoded by an ORF for many or and the polymetric acid by present and the polymetric acid prese
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New Propionibacterium acnes polypeptides and polynucleotides encoding the polypeptide, useful for diagnosing, preventing or treating acne vulgaris, or for stimulating an immune response specific for a P. acnes protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            invention. Note: The sequence data for this parent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Maisonneuve JL;
Jones R, Carter D;
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                                                                                         Propionibacterium acnes predicted ORF-encoded polypeptide #4038.
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                                                                                                                                       Acne vulgaris; antiseborrhoeic; dermatological; antibacterial;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bhatia A,
Benson DR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Example 1; SEQ ID NO 4038; 1481pp; English.
                                                                                                                                                                      immunostimulant; immune response; vaccine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DH,
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Lodes MJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mitcham JL, Skeiky YAW, Pers
Zhang Y, Wang S, Jen S, Lod
Barth B, Vallieve-Douglass J;
                                                                                                                                                                                                                                                                                                                                                                 11-OCT-2002; 2002WO-US032727.
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                                                (first entry)
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                                                                                                                                                                                                                    Propionibacterium acnes.
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Matches 5; Conserv
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                                                20-OCT-2003
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ABM39362;
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ABM39362 standard; protein; 60 AA.

ABM39362 ID ABM2 XX

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Gaps

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55.6%; Score 5; DB 4; Length 60; 100.0%; Pred. No. 1.4e+02; live 0; Mismatches 0; Indels

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01-DEC-2000;
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          Human; immune; haematopoietic; immune/haematopoietic antigen; cancer; cytostatic; gene therapy; vaccine; metastasis.
                                                                                                                                                       Human immune/haematopoietic antigen SEQ ID NO:14519.
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                                       AAM86926 standard; protein; 62
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2000US-0180628P.
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2000US-0226868P.
2000US-0227182P.
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2000US-0228924P.
2000US-0229287P.
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                                                                                                                   (first entry)
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24-AUG-2000;
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                                                                              AAM86926;
RESULT 25
AAM86926
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AAK54951 to AAK64702 encode the human immune/haematopoietic antigen (1) and acid sequences given in AAM82170 to AAM91921. (1) have cytostatic activity, and can be used in gene therapy and vaccine production. (1) proteins and polyvucleotides may be used in the prevention, diagnosis and treatment of diseases associated with inappropriate (1) expression. For example, they may be used to treat disorders associated with decreased expression by rectifying mutations of deletions in a patient's genome that affect the activity of (1) by expressing inactive proteins or to supplement the patients own production of (1). Additionally. (1) polynucleotides may be used to produce the secreted (1), by inserting the nucleic acids into a host cell and culturing the cell to express the cancer metatiases of haematopoietic-related diseases, especially cancers and cancer metastases of haematopoietic-derived cells. AAK64703 concers and cancer human immune/haematopoietic antigen genomic concers metastases of haematopoietic antigen genomic procession invention. AAK454912 to AAK54500 and AAM82169 represent sequences trom the present invention. AAK45491 to AAK54500 and AAM82169
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                                                                                                                                                                                                                                                                                                                                                                                    Nucleic acids encoding human immune/hematopoietic antigen polypeptides, useful for preventing, diagnosing and/or treating cancers and metastasis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human cell death protective cDNA clone CNI-00720 ORF3 protein, SEQ:267.
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100.0%; Pred. No. 1.4
Live 0; Mismatches
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                                                                                                                                                                                                                                                                                 Rosen CA, Barash SC, Ruben SM;
          05-DEC-2000; 2000US-0251988P.
05-DEC-2000; 2000US-0251988P.
08-DEC-2000; 2000US-0251858P.
08-DEC-2000; 2000US-0251868P.
08-DEC-2000; 2000US-0251869P.
08-DEC-2000; 2000US-025199P.
11-DEC-2000; 2000US-025199P.
08-DEC-2000; 2000US-025199P.
                                                                                                                                                                                                                                           (HUMA-) HUMAN GENOME SCI INC
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Sequences AAH84132-AAH84370 represent human nucleic acid sequences which protect against cell death (i.e., apoptosis or necrosis). Sequences or protect against cell death (i.e., apoptosis or necrosis). Sequences of AAH841281, AAH84145, AAH84156, AAH84281, AAH84132, AAH84156, AAH84281, AAH84131, AAH841315 and AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH84281, AAH841841, AAH84281, AAH841841, AAH841841, AAH84181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH848181, AAH84
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Novel protective sequence polynucleotides and polypeptides, used to identify modulators of their expression and activity, which are used in to treat central nervous system conditions, diseases and disorders.
benign tumour, anaemia, gastrointestinal disorder; gastritis; ulcerative colitis; liver disease; biliary cirrhosis; kidney disorder; glomerulonephritis; cystitis; endometriosis; endocrine disorder; Grave's disease; Hashimoto's thyroiditis; skin condition; dermatitis; urticaria; immune disorder; acquired immunodeficiency syndrome; AIDS.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Portbury SD, Puranam K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 1; Fig 10C; 325pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                            (COGE-) COGENT NEUROSCIENCE INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Thomas MB,
                                                                                                                                                                                                                                                                                                                                    11-DEC-2000; 2000WO-US033547.
                                                                                                                                                                                                                                                                                                                                                                                      14-DEC-1999; 99US-00461697.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N-PSDB; AAH84265, AAH84268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2001-390297/41.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Barney S,
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                                                                                                                                                                                                                           WO200145638-A2
                                                                                                                                                                         Homo sapiens.
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Gaps

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55.6%; Score 5; DB 4; Length 64; 100.0%; Pred. No. 1.5e+02; ive 0; Mismatches 0; Indels

Query Match Best Local Similarity 100... Si Conservative

4 WFLRH 8

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WFLRH 28
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AAU50032 standard; protein; 64 AA. AAU50032; RESULT 27

27-FEB-2002 (first entry)

Propionibacterium acnes immunogenic protein #10928.

SAPHO syndrome; synovitis; acne; pustulosis; hypertosis; osteomyelitis; uveitis; endophthalmitis; bone; joint; central nervous system; ELISA; inflammatory lesion; acne vulgaris; enzyme linked immunosorbent assay; dermatological; osteopathic; neuroprotectant.

Propionibacterium acnes,

WO200181581-A2.

01-NOV-2001

20-APR-2001; 2001WO-US012865.

21-APR-2000; 2000US-0199047P. 02-JUN-2000; 2000US-0208841P. 07-JUL-2000; 2000US-0216747P.

(CORI-) CORIXA CORP.

Bhatia A; Persing DH, Mitcham JL, Wang SS, e J, Zhang Y, Jen S, Carter D; L'maisonneuve J, Skeiky YAW,

WPI; 2001-616774/71. N-PSDB; AAS59546 Propionibacterium acnes polypeptides and nucleic acids useful for vaccinating against and diagnosing infections, especially useful for treating acne vulgaris.

Example 1; SEQ ID NO 11227; 1069pp; English.

Sequences AAU39105-AAU68017 represent Propionibacterium acnes immunogenic polypeptides. The proteins and their associated DNA sequences are used in the treatment, prevention and diagnosis of medical conditions caused by a canes. The disorders include SAPHO syndrome (synovitis, acne, pustulosis, hypertosis and osteomyelitis), uveitis and endophthalmitis. The acnes is also involved in infections of bone, joints and the central convolutions asystem, however it is particularly involved in the inflammatory lesions associated with acne vulgaris. A method for detecting the research of P. acnes in a patient comprises contacting a cample with a binding agent that binds to the proteins of the invention of and determining the amount of bound protein in the sample. The and determining the amount of bound protein in the sample. The contacting a contracting and determining the amount of bound protein in the sample. The contacting and activity of P. acnes polypeptides and downregulate expression and activity of P. acnes polypeptides and converse in the production of antibodies can be used as contactions. The antibodies may also be used as contactions of therefore treat P. acnes infections. The antibodies may also be used as contacting p. acnes proteins and activity of P. acnes polypeptides and converse the sample of the sample. By converse infections of the antibodies may also be used as converse and activity of P. acnes proteins for determining p. acnes presence, for example, by converse infections of the printed specification, but was for the print in the production of the printed specification, but was the production of the printed specification, but was the production of the printed specification, but was the production of the printed specification, but was the production of the printed specification, but was the production of the printed specification of the printed specification of the printed specification of the printed specification of the printed specification of the printed specification of the printed specificatio obtained in electronic format directly fr ftp.wipo.int/pub/published_pct_sequences

Sequence 64 AA;

Gaps ö 0; Indels Length 64; Query Match
55.6%; Score 5; DB 4; Les
Best Local Similarity 100.0%; Pred. No. 1.5e+02;
Matches 5; Conservative 0; Mismatches 0;

30 FLRHP 34

ABM46551 standard; protein; 64 AA.

ABM46551;

(first entry) 20-OCT-2003

Propionibacterium acnes predicted ORF-encoded polypeptide #11227.

Acne vulgaris; antiseborrhoeic; dermatological; antibacterial; immunostimulant; immune response; vaccine.

Propionibacterium acnes, WO2003033515-A1.

24-APR-2003.

11-OCT-2002; 2002WO-US032727.

15-OCT-2001; 2001US-00978825.

(CORI-) CORIXA CORP.

Maisonneuve JL; Jones R, Carter D; Persing DH, Bhatia A, Lodes MJ, Benson DR, Mitcham JL, Skeiky YAW, Pers Zhang Y, Wang S, Jen S, Lod Barth B, Vallieve-Douglass J;

WPI; 2003-381789/36. N-PSDB; ACF64475 New Propionibacterium acnes polypeptides and polynucleotides encoding the polypeptide, useful for diagnosing, preventing or treating acne vulgaris, or for stimulating an immune response specific for a P. acnes protein.

Example 1; SEQ ID NO 11227; 1481pp; English.

CC immunogenic fragments of P. acues polypeptides. The invention additionally encompasses expression vectors and host cells comprising a additionally encompasses expression vectors and host cells comprising a polypeptides. The invention additionally encompasses expression vectors and host cells comprising a polypeptide of the invention; and immunogenic of the invention; and immunogenic of the invention; and immune response specific for a P. acues comprising a polypeptide of the invention; and an isolated T cell population comprising T cells prepared to the invention of the invention; and immune response specific for a P. acues polypeptides, antibodies, fusion proteins, T cell populations, or antigen-presenting cells that express the polypeptide); a method and kit for detecting or determining the presence or absence of P. acues in a patient; and a method for inhibiting the development of P. acues in a patient; and a method for inhibiting the development of P. acues in the patient; and a method for inhibiting the development of P. acues in the patient; and a method for inhibiting the development of P. acues in the patient. The P. acues polypeptides, polymucleotides, antibodies, fusion proteins, T cell populations or antigen-presenting cells that express the collypeptides are useful for adagnosing, preventing or treating acue vulgaris, or for stimulation of an immune response against P. acues probes or primers for the cetting frame) contained within the P. acues polymucleotides can all for performing a diagnostic assay. The present sequence cadar for this patent did not form part of invention. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from William will be performed by the sequences. The invention relates to an isolated polynucleotide (ACF64435-ACF64733) encoding a Propionibacterium acnes protein. The invention also relates to polypeptides encoded by the polynucleotides (ABM35624-ABM64536) and to

Sequence 64 AA;

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55.6%; Score 5; DB 6; Length 64; 100.0%; Pred. No. 1.5e+02; Query Match Best Local Similarity

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format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                               AAG98736;
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                                                                                                                                                                                                     RESULT 30
                                                                                                                                                                                                                     AAG9873
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The present invention describes substantially purified human proteins

(referred to as open reading frame, ORFX, where X is 1-11491 (see Table 1

(referred to as open reading frame, ORFX, where X is 1-11491 (see Table 1

in the specification). ABN15762 to ABN27525 encode the human ORFX

contains given in ABB0010 to ABP11500. ORFX proteins are useful for

treating or preventing a pathology associated with an ORFX-associated

disorder in humans, and in the manufacture of a medicament for treating a

contained of cancer, hyperproliferative disorders. ORFX polynucleotide

sequences can be used in gene therapy. ORFX sequences can be used in the

treatment of cancer, hyperproliferative disorders, cirrhosis of liver,

psoriasis, benign tumours, keloid, degenerative disorders has monthage,

consequences can be used in generative disorders, cirrhosis of liver,

psoriasis, benign tumours, keloid, degenerative disorders related to organ

transplantation, cardiovascular diseases, diabetes mellitus, systemic

transplantation, cardiovascular diseases, diabetes mellitus, systemic

consequences and autoimmune disorders such as multiple sclerosis, infectious

diseases, autoimmune disorders such as multiple sclerosis, internated

consequences and autoimmune inflammatory eye disease. ORFX proteins are also

cuseful for treating burns, incisions, ulcers, for treating osteoporosis,

consequences are regeneration and treatment of lung or liver fibrosis,

creperfusion injury in various tissues and conditions resulting from

systemic cytokine damage. N.B. The sequence data for this patent did not

form part of the printed specification, but was obtained in electronic
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                                                                                                                                                                                                                                                            Human, open reading frame; ORFX; gene therapy; cancer; cirrhosis; hyperproliferative disorder; psoriasis; benign tumour; haemorrhage; degenerative disorder; osteoarthritis; neurodegenerative disorder; cardiovascular disease; diabetes mellitus; systemic lupus erythematosus; hypertension; hypothyroidism; cholesterol ester storage disease; immune deficiency; immune disorder; infectious disease; autoimmune disorder; rheumatoid arthritis; autoimmune thyroiditis;
         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Novel human polypeptides and polynuclectides useful for diagnosing, preventing and treating cardiovascular disease, neurodegenerative, hyperproliferative disorders and autoimmune disorders.
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          Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure, SEQ ID NO 7330, 1037pp, English.
                                                                                                                                                                                                                                    Human ORFX protein sequence SEQ ID NO:7330.
            Mismatches
                                                                                                                                              ABP03674 standard; protein; 73 AA.
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29-AUG-2000; 2000US-0228716P.
                                                                                                                                                                                                          (first entry)
            5; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Shimkets RA, Leach MD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (CURA-) CURAGEN CORP.
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N-PSDB; ABN19426.
                                                                                                                                                                                                                                                                                                                                                                          myasthenia gravis
                                                                   30 FLRHP 34
                                          5 FLRHP 9
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                                                                                                                                                                                                          25-JUN-2002
                                                                                                                                                                            ABP03674;
              Matches
                                                                                                                  RESULT 2
ABP03674
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Cell death protective, apoptosis, necrosis, human, drug screening,

W cell death-associated disorder; central nervous system disorder;

W psychiatric disorder; neurological disorder; ischaemia-related disorder;

W prohiatric disorder; neurological disorder; ischaemia-related disorder;

W prokiatric disorder; Alzheimer's disease; Huntington's disease;

W parkinson's disease; infection; meningtis; malaria; trypanosomiasis;

W ascular disease; opthalmological disorder; diabetic retinopathy;

macular degeneration; hypertension; myocardial infarction;

w therosclerosis; respiratory disorder; asthma; transgenic animal;

W chronic obstructive pulmonary disease; neoplastic condition; cancer;

W chronic obstructive pulmonary disease; neoplastic condition; cancer;

W chronic obstructive pulmonary disease; neoplastic condition; cancer;

W chronic obstructive pulmonary disease; hilary cirrhosis; kidney disorder;

W clerative colitis; liver disease; biliary cirrhosis; kidney disorder;

Grave's disease; Hashimoto's thyrodiditis; skin condition; dermatitis;

W urticaria; immune disorder; acquired immunodeficiency syndrome; AIDS.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Novel protective sequence polynucleotides and polypeptides, used to identify modulators of their expression and activity, which are used in to treat central nervous system conditions, diseases and disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human cell death protective cDNA clone CNI-00720 ORF2 protein, SEQ:265.
                                                                                                                                  Gaps
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                                                         Length 73;
                                                         DB 5; Len
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                                          55.6%; Scor.
100.0%; Pred. No. ...
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAG98736 standard; protein; 75 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (COGE-) COGENT NEUROSCIENCE INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Barney S, Thomas MB,
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                                                                                                                                             Conservative
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                                  Query Match
Best Local Similarity
5, Conserve
                                                                                                                                                                                                                                                                                   7
                                                                                                                                                                                                                  FLRHP 9
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Sequence 73 AA;
                                                                                                                                                                                                                                                                                   3 FLRHP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        21-SEP-2001
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c death, and to screen for compounds which modulate their activity or death, and to screen for compounds which modulate their activity or expression. Such modulators, preferably a small organic molecule, an antibody, a ribozyme, or an antisense molecule, can also be used to treat central nervous system including psychiatric or neurological disorders, especially ischeamia-related conditions such as strokes, and also includes neurodegenerative disorders such as Alzheimer's disease, with includes neurodegenerative disorders such as Alzheimer's disease, conditions entral new a section such as meningitis, malzala, or trypanosomiasis, vascular diseases such as meningitis, malzala, or trypanosomiasis; eye conditions such as lachemic encephalopathy or cerebral infarction, typertension, myocardial infarction; sheroscierosis; respiratory conditions such as asthma or chronic obstructive pulmonary disease; conditions such as cancers or benign tumours; blood cell conditions such as cancers or benign tumours; blood cell or ulcerative colitis; liver conditions such as pastrointestinal conditions such as gastrointestinal tions such as gastrointes or immune system disorders conditionally be used to generate animal models of cell death-associated conlumentials.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
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0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human excretory related polypeptide SEQ ID NO 581.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAM99844 standard; protein; 76 AA.
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2000US-0190076P.
2000US-0198123P.
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2000US-0184664P.
2000US-0186350P.
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2000US-0209467P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 75 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO200155313-A2.
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16-MAR-2000;
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prevention of: (a) cancer, e.g. breast and ovarian cancer and other cancers of the adrenal gland, bone, bone marrow, breast, gastrointestinal tract, liver, lung, or urogenital; (b) immune disorders e.g. Addison's disease, allergies, autoimmune haemolytic anaemia, autoimmune thyroidits, diabetes mallitus, Crohn's disease, multiple sclerosis, theumatoid arthritis and ulcerative collifis; (c) cardiovascular disorders such as myocardial ischaemias; (d) wound healing; (e) neurological diseases e.g. cerebral anoxia and epilepsy; and (f) infectious diseases such as viral, bacterial, fungal and parasitic infections. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences
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02-OCT-2000; 2
13-OCT-2000; 2
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2000US-0246610P-2000US-0246611P-2000US-0249207P-2000US-0249208P-2000US-0249210P-2000US-0249210P-2000US-0249211P-2000US-0249211P-2000US-0249211P-2000US-0249211P-2000US-0249211P-2000US - 0249218P . 2000US - 0249244P . 2000US - 0249245P . 2000US - 0249264P . 2000US - 0249265P . 2000US-0249214P. 2000US-0249215P. 2000US-0249216P. 2000US-0249216P. 2000US-0249299P. 2000US-0249300P. 2000US-0250160P. 2000US-0250391P. 2000US-0251030P. 2000US-0251988P. 2000US-0256719P. 2000US-0251856P 2000US-0251479P 08-NOV-2000; 08-NOV-2000; 08-NOV-2000; 08-NOV-2000; 08-NOV-2000; 17-NOV-2000; 17-NOV-2000; 17-NOV-2000; 17-NOV-2000; 17-NOV-2000; 17-NOV-2000; 17-NOV-2000; 17-NOV-2000; 05-DEC-2000; 05-DEC-2000; 05-DEC-2000; 17-NOV-2000; 17-NOV-2000; 7-NOV-2000; 01-DEC-2000; 06-DEC-2000; 17-NOV-2000; 17-NOV-2000;

(HUMA-) HUMAN GENOME SCI INC

Rosen CA, Barash SC, Ruben SM

WPI; 2001-488784/53. N-PSDB; AAI63213.

Claim 11; SEQ ID NO 528; 564pp + Sequence Listing; English

New isolated nucleic acids and polypeptides, useful for diagnosing, treating and/or preventing human diseases and disorders.

The invention relates to novel kidney related polynucleotides (AAM62971-AAM6293) and the encoded polypeptides (AAM42417-AAM42691) collectively known as kidney antigens and the use of such kidney antigens for concern metastases. The polynucleotides and proteins are also useful for preventing, treating or ameliorating medical conditions e.g. by protein or gene therapy. The genes are isolated from a range of human tissues disclosed in the specification. The nucleic acids, proteins, antibodies and ent) agonists are useful in the diagnosis, treatment and prevention of: (a) cancer, e.g. breast and ovarian cancer, and other cancers of the arenal gland, bone, bone marrow, breast, gastrointestinal tract, liver, lung, or urgomital; (b) immune disorders e.g. Addison's disease, allergies, autoimmune haemolytic anaemia, autoimmune thyroiditis, allergies, autoimmune haemolytic anaemia, autoimmune thyroiditis, diabetes mellitus, Crohn's disease, multiple sclerosis, rheumatoid are retritits and ulcerative colitis; (c) cardiovascular disorders such as wirely cerebral anoxia and epilepsy; and (f) infectious diseases such as viral, batent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at

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Claim 2; SEQ ID NO 8208; 14pp; English
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                                                                                                                                                                                                                                                                                                      Human; ORF; open reading frame; ORFX; drug screening; diagnosis; disease monitoring; cytokine; cell proliferation; cell differentiation; mamune modulation; haematopoiesis regulation; tissue growth; angiogenesis; activin; inhibin; chemotactic; chemokinetic; haemostatic; thrombolytic; tumour inhibition; bodily characteristic; fertility; cardiovascular disease; immune system disorder; neurological disorder; cardiovascular disorder; immune system disorder; organ transplantation; tissue growth disorder; tissue regeneration disorder; diabetes mellitus; hypothyroidism; cholesterol ester storage disease; infection; vulnerary; wastorpoic, antiabsoriat, cytostatic; nockropic; neuroprotective; antidiabetic; cytostatic; nockropic; cardiatherosolerotic; anticoagulant; thrombolytic; cardiatherosolerotic; antidiamatory; immunomodulator; dermatological; analgesic; virucide; antihaeterial; fungicide.
                                                                              Gaps
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                                                                             0; Indels
                                                   Length 76;
                                                  55.6%; Score 5; DB 4; Ler
100.0%; Pred. No. 1.7e+02;
ive 0; Mismatches 0;
ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                 Human ORF3835 protein, SEQ ID NO:7670.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 10; Page 2162; 2508pp; English.
                                                                                                                                                                                                     ABP34862 standard; protein; 82 AA.
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                                                     55.6%;
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                                                                               5; Conservative
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                                                               Local Similarity
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                                                                                                         TWFLR 7
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                          Sequence 76 AA;
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                                                      Query Match
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cell differentiation, immune modulation, haematopoiesis regulation, contissue growth, angiogenesis, activin or inhibin activity, chemotactic/confementationetic activity, tumour inhibition activity, receptor/ligand, antiinflammatory activity, tumour inhibition activity, and antiinflective activity, and may also be involved in the determination of bodily characteristics, fertility and behaviour. ORFX protebins, or bedily characteristics, fertility and behaviour. ORFX protebins, corbodily characteristics, fertility and behaviour. ORFX protebins, corbodily characteristics, fertility and behaviour. ORFX protebins, corbodily characteristics, fertility and behaviour. ORFX protebins, corpus and antibodies may be used in the treatment of cancers, corpus transplantation, disorders such as epilepsy and Alzheimer's disease.

CC cardiovascular diseases, immune system disorders, disorders related to organ transplantation, disorders of tissue growth and regeneration, disorders mellitus, hypothyroidism, and cholesterol ester corpus and probes, in the detection of ORFX genomic sequences or transpripts, in the identification and cloning of homologous corpusation, in genetic diagnosis, and in foremaic belongy. The ORFX cource of primers may additionally be used to produce transgenic animals content, and in drug screening. The ORFX proteins may also be used as immunogens to generate specific antibodies, which are useful in the content and monitoring of ORFX-associated diseases
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               plant, transgenic, cold tolerance, growth rate, drought tolerance; disease resistance; galactomannan production; plant growth regulator; heat tolerance, herbicide tolerance; lignin production; extreme osmotic condition tolerance; pathogens resistance; pest resistance; pest resistance; yield improvement; seed oil yield; seed protein yield.
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28-APR-2003; 2003US-00425115.
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Propionibacterium acnes polypeptides and nucleic acids useful for vaccinating against and diagnosing infections, especially useful for

treating acne vulgaris.

Bhatia A;

Mitcham JL, Wang SS, , Jen S, Carter D;

Skeiky YAW, Persing DH, M L'maisonneuve J, Zhang Y,

WPI; 2001-616774/71.

N-PSDB; AASS9551

02-JUN-2000; 2000US-0208841P.

(CORI-) CORIXA CORP.

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C (SEQ ID NO: 5545-11088). The CDMAs and proteins are from corn, soybean, C (SEQ ID NO: 5545-11088). The CDMAs and proteins are from corn, soybean, sequences is derived from which organism. Also included is a method of producing a plant having an improved property, comprising a method of plant with a recombinant DNA construct comprising a promoter region of plant with a recombinant DNA construct comprising a promoter region of plant a plant cell operably joined to a polynucleotide encoding a plant cell operably joined to a polynucleotide encoding a plant to large selected from improving plant cold tolerance, for manipulating growth rate in plant cells by modification of the cell cycle plant frought registrance to plant disease, for adjactomannan production, for production of plant disease, for improving plant heat tolerance to extreme computers, for improving plant tolerance to extreme computers, for improving plant tolerance to extreme computers, for improving plant tolerance to extreme computers, for improving plant tolerance to extreme computers, for improving plant tolerance to extreme computers, for yield improvement by modification of plant growth regulators, for improving plant tolerance to extreme computer, for yield improvement by modification of compositions for modifying seed protein yield and/or content, for yield improvement by modification of development under at least one stress condition. The polymucleotide may and for yield improvement by providing improved plant growth and modification of carbohydrate, nitrogen or phosphorus use and/or uptake and for yield improvement by providing improved plant growth and gevelopment under at least one stress condition. The polymucleotide may are useful in the field of biochemistry and compositions of the present invention are useful in the field of biochemistry and cological characteristics such as increased yield, improved by improved by also enced a plant tolerance to plant persent sequence to optain persent sequence to optain persent sequence is one of th
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The invention relates a recombinant DNA construct comprising a polynucleotide having any of 5544 nucleotide sequences (cDNAs SEQ ID NO: 1.5544) and encoding a polypeptide with any of 5544 amino acid sequences (SEQ ID NO: 5545-11088). The CDNAs and proteins are from corn, soybean,
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Best Local Similarity 100.00
Best Local Si Conservative
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SAPHO syndrome; synovitis; acne; pustulosis; hypertosis; osteomyelitis; uveitis; endophthalmitis; bone; joint; central nervous system; ELISA; inflammatory lesion; acne vulgaris; enzyme linked immunosorbent assay; dermatological; osteopathic; neuroprotectant.
                                                                                                                                                                                                                                      Propionibacterium acnes immunogenic protein #12414.
                                                         AAU51518 standard; protein; 86 AA.
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                                                                                                                                                                             (first entry)
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                                                                                                                   AAU51518;
RESULT 35
                                 AAU51518
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(CORI-) CORIXA CORP.

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Sequences AAU39105-AAU68017 represent Propionibacterium acnes immunogenic polypeptides. The proteins and their associated DNA sequences are used in the treatment, prevention and diagnosis of medical conditions caused by 2. A acnes. The disorders include SABHO syndrome (synovitis, acne, pustulosis, hypertosis and osteomyelitis), uveitis and endophthalmitis. The acnes is also involved in infections of bone, joints and the central nervous system, however it is particularly involved in the inflammatory lesions associated with acne vulgaris. A method for detecting the cample with a binding agent that binds to the proteins of the invention and determining the amount of bound protein in the sample. The collypeptides may be used as antigens in the production of antibodies of specific for P acnes proteins. These antibodies can be used to downregulate expression and activity of P. acnes polypeptides and close treat P. acnes infections. The antibodies may also be used as diagnostic agents for determining P. acnes proteins of clasmostic agents for determining P. acnes protein the sequence data for chargement inked immunosorbent assay (ELISA). Note: The sequence data for the intime intime in the protein but was for it intime intime format directly from WIPO at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Propionibacterium acnes predicted ORF-encoded polypeptide #12713.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Acne vulgaris; antiseborrhoeic; dermatological; antibacterial; immunostimulant; immune response; vaccine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity 100.0%; Pred. No. 1.9e+02; 5; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                   Example 1; SEQ ID NO 12713; 1069pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABM48037 standard; protein; 86 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11-OCT-2002; 2002WO-US032727.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15-OCT-2001; 2001US-00978825.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Propionibacterium acnes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 FLRHP 6
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 86 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20-OCT-2003
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Matches
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plant protectant; plant growth regulant; gene therapy; plant; recombinant DNA construct; physical array; plant breeding marker; cold tolerance; herbicide tolerance; extreme osmotic condition; pathogen tolerance; pest tolerance; growth rate; cell cycle pathway; disease resistence; aglactomannan production; lighth production; plant growth regulator; yield; plant growth; plant development; seed oil; protein yield;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Plant full length insert polypeptide segid 57614.
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADX94950 standard; protein; 89 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                         Query Match 55.6
Best Local Similarity 100.
Matches 5; Conservative
                                       WPI; 2003-381789/36
                                                                                                                                                                                                                                                                                                                                                                                         5 FLRHP 9
                                                                                                                                                                                                                                                                                                                                                                                                        9
                                              N-PSDB; ACF64480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      protein content
                                                                                                                                                                                                                                                                                                                                          Sequence 86 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21-APR-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADX94950;
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Claim 1; SEQ ID NO 57614; 15pp; English.
                                                                                                                         28-APR-2003; 2003US-00425114.
                                                                                                                                                                           06-MAY-1999; 99US-00304517.
05-NOV-2001; 2001US-00985678.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2004-180133/17.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               improving yield.
                      JS2004034888-A1
                                                                         19-FEB-2004.
                                                                                                                                                                                                                                                                (LIUJ/) 1
(ZHOU/) 2
(KOVA/) 1
(SCRE/) 5
                                                                                                                                                                                                                                                                                                                                                                      (TABA/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Liu J,
The invention relates to an isolated polynuclectide (ACF64435-ACF64733)

cenceding a Propionibacterium acnes protein. The invention also relates to polypeptides encoded by the polynucleotides (ABM35624-ABM64536) and to immunogenic fragments of P. acnes polypeptides. The invention additionally encompasses expression vectors and host cells comprising a comprising a polypeptide of the invention; tusion proteins comprising a polypeptide of the invention; tusion proteins comprising proteins comprising a polypeptide of the invention; and the present of comprising T cells prepared to polypeptide and an isolated T cell population comprising T cells prepared to polymuclectides, antibodies, fusion proteins, T cell populations, or antigen-presenting cells that express the polypeptide); a method and kit for detecting or determining the presence or absence of P. acnes in a compatient; and a method for inhibiting the development of P. acnes in a patient. The P. acnes polypeptides, polymuclectides, antibodies, fusion proteins, T cell populations or antigen-presenting cells that express the polypeptides are useful for diagnosing, preventing or treating acne protein. The polymuclectides can also be used as probes or primers for the primulation of an immune response specific for a P. acnes or protein. The polymuclectides can also be used as probes or primers for and the kit is useful for performing a diagnostic assay. The present cadants from the kit is useful for performing a diagnostic assay. The present cadants framely contained within the P. acnes polymuclectides of the framely contained within the P. acnes polymuclectides of the first framely contained within the P. acnes polymuclectides of the first first first in the primers for the primer form and the first first first for the primer form and the first first first for the primer form and the first for the primer form and the first for the primer form and the first form and the first first first form and the form form form form form form and form form form form form form 
                                                                                                                                                                                                             New Propionibacterium acnes polypeptides and polynucleotides encoding the polypeptide, useful for diagnosing, preventing or treating acne vulgaris, or for stimulating an immune response specific for a P. acnes protein.
                                                  ä
                         Maisonneuve JL;
Jones R, Carter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        from WIPO at ftp.wipo.int/pub/published_pct_sequences
                            Persing DH, Bhatia A,
Lodes MJ, Benson DR,
                                                                                                                                                                                                                                                                                                                           Example 1; SEQ ID NO 12713; 1481pp; English.
                         Mitcham JL, Skeiky YAW, Pers
Zhang Y, Wang S, Jen S, Lod
Barth B, Vallieve-Douglass J;
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recombinant DNA construct, useful for improving plant tolerance to I, heat, drought, herbicides, extreme osmotic conditions, pathogens or s, for conferring increased resistance to plant disease, or for

Tabaska JE,

Kovalic DK, Screen SE,

Zhou Y,

CAO Y.

ZHOU Y.
KOVALIC D K.
SCREEN S E.
TABASKA J E.

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The invention describes a recombinant DNA construct comprising a polymucleotide consisting of a sequence encoding an amino acid sequence available in electronic form from the US patent office at the sequence. Large of the US patent of Fice at the Sequence as also useful in physical arrays of molecules and as plant breeding markers. The recombinant DNA construct is useful for improving plant tolerance to cold, heat, drought, herbicides, extreme compositions, pathogens or pests, for manipulating growth rate in plant collab by modification of the cell cycle pathway, for conferring increased resistance to plant disease, for producing galactomannan, combination in plants, for increasing the rate of homologous recombination in plants, for improving yield by modification of photosynthesis or carbohydrate, nitrogen or phosphorus use and/or uptake or by providing improved plant growth and development under at least one stress condition or for modifying seed oil or protein yield and/or content. This is the amino acid sequence of a plant full length insert polymetric that can be used in the recombinant DNA construct of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Transgenic plant; DNA replication; gene regulation; gene expression.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     55.6%; Score 5; DB 8; Length 89; 100.0%; Pred. No. 1.9e+02; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           M. xanthus protein sequence, seq id 13342.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ABM94143 standard; protein; 98 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Myxococcus xanthus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WFLRH 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4 WFLRH 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 89 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         02-JUN-2005
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ABM94143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
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0; Indels

55.6%; Score 5; DB 6; Length 86; 100.0%; Pred. No. 1.9e+02;

100.0%; Pred. no.

US6833447-B1.

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AAY74113;
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Matches
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                                                                                                                                                                                                                             The invention relates to a substantially purified nucleic acid molecule encoding a nitrite reductase of SEQ ID NO. 11926. Further disclosed is a recombinant DNA construct for expression of a nitrite reductase gene in a plant cell, and a plant cell comprising the recombinant DNA construct. The nucleic acid is useful for determining gene expression, identifying mutations in a gene of interest, and for constructing mutations in a gene of interest. Sequences given in records for SEQ IDS 9692-16825 represent a group of 7134 Mxyococcus xanthus proteins and peptides. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from USPTO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       anticonvulsant; nootropic; neuroprotective; cerebroprotective; anti-HIV; antiallergic; antinfiammatory; thyromimetic; gene therapy; cell proliferative disorder; endocrine disorder; neurological disorder; immune system disorder; infiammatory disorder; developmental disorder; reproductive disorder; vesicle-trafficking disorder; infection.
                                                                                                                                                 New substantially purified Myxococcus xanthus nucleic acid molecule encoding a nitrite reductase, useful for determining gene expression, identifying mutations in a gene of interest, and for constructing mutations in a gene of interest.
                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            enzyme; human; ENZM; cytostatic; antiarteriosclerotic; antidiabetic;
                                                                                                                                                                                                                                                                                                                                                                                                             .;
0
                                                                                                                                                                                                                                                                                                                                                                                    55.6%; Score 5; DB 9; Length 98; 100.0%; Pred. No. 2.1e+02; ive 0; Mismatches 0; Indels
                                                                                                       Wiegand RC;
                                                                                                                                                                                                           Example 2; SEQ ID NO 13342; 25pp; English.
                                                                                                     Slater SC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADC14235 standard; protein; 102 AA.
                                                                             (MONS ) MONSANTO TECHNOLOGY LLC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; 2001US-0326388P.
; 2001US-0328979P.
; 2001US-0348284P.
; 2001US-0338048P.
; 2001US-03338048P.
                                 10-JUL-2001; 2001US-00902540.
                                                       10-JUL-2000; 2000US-0217883P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2002WO-US031096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 100.
Matches 5; Conservative
                                                                                                    Hinkle GJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human enzyme ENZM-41.
                                                                                                                           WPI; 2005-028716/03
                                                                                                                                                                                                                                                                                                                                                                                                                                                       FLRHP 33
                                                                                                                                                                                                                                                                                                                                                                                                                                  5 FLRHP 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO2003042357-A2
                                                                                                                                                                                                                                                                                                                                                               Sequence 98 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        26-OCT-2001;
08-NOV-2001;
16-NOV-2001;
            21-DEC-2004.
                                                                                                    Goldman BS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26-SEP-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      28-SEP-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18-DEC-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 12-OCT-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19-OCT-2001;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADC14235;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 39
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The invention relates to a novel isolated human enzyme (ENZM)

polypeptide. A polypeptide of the invention has cytostatic,
antiatteriosclerotic, antidabetic, antidabetic, antidabetic, antidabetic, antidabetic, antidabetic, antidabetic, antidabetic, antidabetic, antidabetic, antidabetic, antidabetic, antidabetic, antidabetic, antidabetic, antidabetic, antidabetic, antidabetic, antidabetic, antidabetic, antidabetic, antidabetic, antidabetic, antidabetic, antidabetic, antidabetic, antidabetic, antidaposing, treating and polypeptides and polynuclocides are useful in diagnosing, treating and preventing diseases or conditions associated with the decreased expression or overexpression of ENZM, such as cell proliferative (e.g. cancer, atherosclerosis), endocrine (e.g. diabetes), neurological (e.g. cancer, atherosclerosis), endocrine (e.g. diabetes), neurological (e.g. epilepsy, Huntington's disease, atroke), immune/inflammatory (e.g. AIDS, allegies), developmental (e.g. Hypothyroidism, Cushing's syndrome), reproductive and vesicle-trafficking disorders, or infections. These are also useful in assessing the effects of exogenous compounds on the expression of nucleic acid and amino acid sequences of ENZM. The ENZM or its fragments are useful in screening compounds for effectiveness as a gonit or antagonist of the polypeptide, or in altering the expression of the target polynucleotide and compounds that specifically bind to or moditoring or measuring protein-protein interactions, and gene expression profiles. The sequences shown in ADC14195-ADC14247 represent ENZM proteins of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New human enzymes (ENZM), useful for diagnosing, treating and preventing diseases or conditions associated with the aberrant ENZM expression e.g. cancer, diabetes, epilepsy, or infections.
                                                                                                                                                                                                                                                                                                                                       Baughn MR;
                                                                                                                                                                                                                                                                                                                               Chawla NK, Baughn MR
Ison CH, Griffin JA;
, Kable AE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                         Yang J, Lu DAM, Yue H, Elliott VS, Warren BA, Duggan BM; Forsythe IJ, Lee EA, Hafalia AJA, Ramkumar J, Chawla NK, Baugh Becha SD, Gorrad AE, Tran UK, Li JX, Yao MG, Ison CH, Griffil Lee SY, Chang H, Emerling BM, Tang YT, Lal PG, Kable AE; Marquis JP, Jiang X, Jackson AA, Zebarjadian Y, Swarnakar A, Wilson AD, Jin P, Richardson TW, Bhatia U, Burrill JD, Lee S; Blake JJ, Ho A, Zheng W, Gao J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pancreas; tumor; EST; expressed sequence tag; human; cytostatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human prostate tumor EST fragment derived protein #300.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 1; SEQ ID NO 41; 416pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAY74113 standard; protein; 104 AA.
   29-MAR-2002; 2002US-0368722P.
29-MAR-2002; 2002US-0368799P.
17-MAY-2002; 2002US-0381558P.
07-JUN-2002; 2002US-0387119P.
                                                                                                                                                  21-JUN-2002; 2002US-0390662P
                                                                                                                                                                                                                       (INCY-) INCYTE GENOMICS INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2003-449567/42.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N-PSDB; ADC14288
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 102 AA;
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29-MAR-2002;
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This invention describes novel polypeptides and their encoding nucleic acids derived from human pancreatic tumor tissue which have cytostatic activity. The sequences are also useful in producing pharmaceutical compositions for treatment of pancreatic tumors. AAYT3814-Y74252 represent protein fragments encoded by the human pancreatic tumor cDNA library derived expressed sequence tag (EST) sequences represented in AAZ52858-Z53014
                                                                                                                                                                                                                                                     New human nucleic acid sequences from pancreatic tumors, and related
                                                                                                                                                                            Rosenthal A, Specht T, Hinzmann B, Schmitt A, Pilarsky C,
                                                                                                                                               (META-) METAGEN GES GENOMFORSCHUNG MBH.
                                                                                                                                                                                                                                                                                                 Claim 23; Page 434; 502pp; German.
                                                                                                                                                                                                        WPI; 1999-621386/54.
N-PSDB; AAZ52956.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 104 AA;
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Dahl E;

98DE-01020190. 98DE-01020190

28-APR-1998; 28-APR-1998;

DE19820190-A1 Homo sapiens.

04-NOV-1999.

ó Ouery Match 55.6%; Score 5; DB 2; Length 104; Best Local Similarity 100.0%; Pred. No. 2.2e+02; Matches 5; Conservative 0; Mismatches 0; Indels ò

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Gaps

85 FLRHP 89 S FLRHP 9

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Search completed: August 31, 2006, 10:46:44 Job time : 116.75 secs

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protein W09G10.5 [imported] - Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Date: 10-May-2001 #sequence_revision 10-May-2001 #text_change 09-Jul-2004
C;Accession: B88102
R;anonymous, The C elegans Sequencing Consortium.
Science 282, 2012-2018, 1998
A;Title: Genome sequence of the nematode C. elegans: a platform for investigating biology
A;Reference number: A75000; MUID: 99069613; PMID: 9851916
A;Note: see websites genome.wustl.edu/gsc/C_elegans/ and www sanger.ac.uk/Projects/C_elegans/ and www.sanger.ac.uk/Projects/C_elegans/                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mutator MutT protein homolog yjhB - Bacillus subtilis
C;Species: Bacillus subtilis
C;Species: Bacillus subtilis
C;Date: 05-Dec-1997 #sequence_revision 05-Dec-1997 #text_change 09-Jul-2004
C;Accession: H69850
C;Accession: H69850
C; Bron, S; Brouillet, S; Bruschi, C.V.; Caldwell, B.; Capuano, V.; Carter, N.M.; Choi A.; Ehrlich, S.D.; Emmerson, P.T.; Entlan, K.D.; Errington, J.; Fabret, C.; Ferrari, E. Nature 390, 249-256, 1997
A; Althors: Foulger, D.; Fritz, C.; Fujita, M.; Fujita, Y.; Fuma, S.; Galizzi, A.; Gallert iech, J.; Harwood, C.R.; Henaut, A.; Hilbert, H.; Holsappel, S.; Hosono, S.; Hullo, M.F.;
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                                                                                                                          grappa chain - African clawed frog

Grapcies: Xenopus laevis (African clawed frog)

Grate: 21-Nov-1993 #sequence_revision 10-Nov-1995 #text_change 20-Sep-1999

Grate: 21-Nov-1993 #sequence_revision 10-Nov-1995 #text_change 20-Sep-1999

Gracession: 814077

BMBO U. 10, 505-511, 1991

A; Title: Evolution of immunoglobulin light chain genes: analysis of Xenopus IgL isotypes

A; Reference number: $14076, MUID:91160503; PMID:1705882

A; Residues: 1-132 < SCH>
A; Residues: 1-132 < SCH>
A; Residues: 1-132 < SCH>
A; Residues: I-132 < SCH>
C; Superfamily: immunoglobulin V region; immunoglobulin homology

C; Keywords: heterotetramer; immunoglobulin
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C;Superfamily: Caenorhabditis elegans hypothetical protein C31G12.2
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100.0%; Pred. No. 35;
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A;Residues: 1-115 <GIN>
A;Cross-references: UNIPROT:P03290; UNIPARC:UPI00001392B5
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B44370
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H72633
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A;Experimental source: strain 168
C;Genetics:
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Koetter, P.; Koningstein, G.; Krogh, S.; Kumano, M.; Kurita, K.; Lapidus, A.; Lardinois, A.; Authors: Lauber, J.; Lazarevic, V.; Lee, S.M.; Levine, A.; Liu, H.; Masuda, S.; Maueel, Y. M.; Ogawa, K.; Ogiwara, A.; Oudega, B.; Park, S.H.; Parro, V.; Pohl, T.M.; Portetelle Rieger, M.; Rivolta, C.; Roche, B.; Roche, B.; Rose, M.; Sadaie, Y.; Sato, T.; Sortetelle A, Authors: Schleich, S.; Schroeter, R.; Scoffone, P.; Sekiguchi, J.; Sekowska, A.; Serona akeuchi, M.; Tamakoshi, A.; Tanaka, T.; Terpstra, P.; Tognoni, A.; Tosato, V.; Uchiyama, T.; Wipat, A.; Yamamoto, H.; Vamane, K.; Yasumoto, K.; Yasumoto, V.; Uchiyama, A; Authors: Yoshikawa, H.; Zumstein, B.; Yoshikawa, H.; Danchin, A.; Yoshida, K.; Akeference number: A65580; MUID: 98044033; PMID: 9384377
A;Accession: H69850
A;Status: preliminary; nucleic acid sequence not shown; translation not shown
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C;Species Mycoplasma pulmonis
C;Date: 24-May-2001 #sequence_revision 24-May-2001 #text_change 09-Jul-2004
C;Accession: F90534
R;Chambaud, I:, Heilig, R.; Ferris, S.; Barbe, V.; Samson, D.; Galisson, F.; Moszer, I.;
Nucleic Acids Res. 29, 2145-2153, 2001
A;Title: The complete genome sequence of the murine respiratory pathogen Mycoplasma pulm A;Reference number: A99512; MUID:21267165; PMID:11353084
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C;Superfamily: maize stripe virus major noncapsid protein
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A;Molecule type: DNA
A;Residues: 1-196 <NUA
A;Residues: 1-196 <NUA
A;Experimental source: strain UAB CTIP
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100.0%; Pred. No. 43;
tive 0; Mismatches
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100.0%; Pred. No. 44;
:ive 0; Mismatches
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Best Local Similarity 100.
Matches 5; Conservative
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A; Residues: 1-178 <ZHU>
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Best Local Similarity
Matches 5; Conserv
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A,Genetic code: SGC3
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Cross-references: UNIPROT:076574; UNIPARC:UPI000007CD7A; EMBL:AF077534; FIDN:AAC26289.1
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A,Residues: 1-221 <SEE>
A,Cross-references: UNIPROT:Q9X802; UNIPARC:UPI0000DAF6B; EMBL:AL049497; PIDN:CAB39870.1
A,Experimental source: strain A3(2)
C,Genetics:
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                                                                                                                                                                                                                                                                                       hypothetical protein K07D4.5 - Caenorhabditis elegans
C,Species: Caenorhabditis elegans
C,Date: 29-0ct_1999 #sequence_revision 29-0ct-1999 #text_change 31-Dec-2004
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C;Date: 20-Apr-2001 #sequence_revision 20-Apr-2001 #text_change 09-Jul-2004
C;Accession: B87657
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Length 196;
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C;Superfamily: ompR protein; response regulator homology
                                                                                                                                                                                                                                                                                                                                                                                               R;Henkhaus, J.; Wohldmann, P. submitted to the EMBL Data Library, July 1998
A;Description: The sequence of C. elegans cosmid K07D4
A;Reference number: Z21327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Experimental source: strain Bristol N2; clone K07D4
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A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
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A,Accession: T35525
A,Status: preliminary; translated from GB/EMBL/DDBJ
55.6%; Score 5; DB 2;
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55.6%; Score 5; DB 2
Best Local Similarity 100.0%; Pred. No. 50;
Matches 5; Conservative 0; Mismatches
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A;Introns: 25/3; 68/1; 127/1; 160/2
                                                  5; Conservative
                      Best Local Similarity
Matches 5; Conserv
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nes 5; Conserv
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Query Match Best Local Similarity Matches 5, Conserv

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A;Cross-references: UNIPARC:UP1000059F2E; GB:AL513382; PIDN:CAD01623.1; PID:g16502477; C
C;Genetics:
A;Gene: STY1354
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A;Cross-references: UNIPROT:034170; UNIPARC:UPI00000D1464; GB:AE008688; PIDN:AAL41575.1;
A;Experimental source: strain C58 (Dupont)
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A,Title: The Genome of the Natural Genetic Engineer Agrobacterium tumefaciens
A,Reference number: AB2577; MUID:21608550; PMID:11743193
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C;Superfamily: Caenorhabditis transposon Tc1 hypothetical 32K protein
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100.0%; Pred. No. 57;
:ive 0; Mismatches
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100.0%; Pred. No. 55;
ive 0; Mismatches
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Best Local Similarity 100.
Matches 5; Conservative
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Best Local Similarity 100.
Matches 5; Conservative
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A,Status: preliminary
A,Molecule type: DNA
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R;Nierman, W.C.; Feldblyum, T.V.; Paulsen, I.T.; Nelson, K.E.; Eisen, J.; Heidelberg, J. B.; Laub, M.T.; DeBoy, R.T.; Dodson, R.J.; Durkin, A.S.; Gwinn, M.L.; Haft, D.H.; Kolorin, J.; Ermolaeva, M.; White, O.; Salzberg, S.L.; Shapiro, L.; Venter, J.C.; Fraser, C.M. Proc. Natl. Acad. Sci. US.A. 98, 4136-4141, 2011
A;Title: Complete Genome Sequence of Caulobacter creecentus.
A;Reference number: A87249; MUID:21173698, PMID:11259647
A;Accession: BR557
A;Status: preliminary
A;Nolecule type: DNA
A;Residues: 1-224 <STO>
A;Accessives: 1-224 <STO>
A;Groser-references: UNIPROT:Q9A3B2; UNIPARC:UPIO0000C7A0F; GB:AE005673; NID:g13424986; F G;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein COSE4.8 [imported] - Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Species: O-May-2001 #sequence_revision 10-May-2001 #text_change 09-Jul-2004
C;Accession: C88939
R;anonymous, The C. elegans Sequencing Consortium.
Science 282, 2012-2018, 1998
A;Title: Genome sequence of the nematode C. elegans: a platform for investigating biolog A;Title: Genome sequence of the nematode C. elegans/ and www sanger.ac.uk/Projects/C_ele A;Note: see websites genome.wustl.edu/gsc/C_elegans/ and www sanger.ac.uk/Projects/C_ele A;Note: published errata appeared in Science 283, 35, 1999; Science 283, 2103, 1999; and
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A;Cross-references: UNIPROT: 017356; UNIPARC: UPI0000082F2F; GB: chr_V; PIDN: AAB71277.1; PI
A;Note: similar to C. elegans TC3 transposase (SP:34257)
C;Genetics:
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C,Superfamily: Caenorhabditis transposon Tc1 hypothetical 32K protein
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Similarity 100.0%; Pred. No. 54; 5; Conservative 0; Mismatches

Ouery Match Best Local Similarity Matches 5; Conserv

A; Accession: C88939 A; Status: preliminary A; Molecule type: DNA

184 FLRHP 188

5 FLRHP 9

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Length 270;

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A,Molecule type: DNA
MyResidues: 1-270. eBLAT>
A,Residues: 1-270. eBLAT>
A,Exesidues: 1-270. eBLAT>
A,Experimental source: errain K-12, substrain MG1655
C,Superfamily: Escherichia coli hypothetical protein b1669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C,Accession: D85774

R;Perna, N.T.; Plunkett III, G.; Burland, V.; Mau, B.; Glasner, J.D.; Rose, D.J.; Mayhew, Iller, L.; Grobbeck, E.J.; Davis, N.W.; Lim, A.; Dimalanta, E.; Potamousis, K.; Apodaca, Nature 409, 529-533, 2001

A;Title: Genome sequence of enterohemorrhagic Escherichia coli O157:H7.

A;Reference number: A85480; MUID:21074935; PMID:11206551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-270 <STO>
A;Cross-references: UNIPROT:08X618; UNIPARC:UPI0000D0C14; GB:AE005174; NID:g12515668; P;
A;Experimental source: strain 0157:H7, substrain EDL933
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C;Species: Bs-U1-2001 #sequence_revision 18-Jul-2001 #text_change 09-Jul-2004
C;Accession: H90925
R;Hayashi, T.; Makino, K.; Ohnishi, M.; Kurokawa, K.; Ishii, K.; Yokoyama, K.; Han, C.G., gasawara, N.; Yasunaga, T.; Kuhara, S.; Shiba, T.; Hattori, M.; Shinagawa, H.
A;Ttle: Complete genome sequence of enterohemorrhagic Escherichia coli O157:H7 and genom A;Reference number: A99629; MUID:21156211; PMID:11258796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         hypothėtical protein 22696 [imported] - Bscherichia coli (strain 0157:H7, substrain EDL9.
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XResidues: 1-270 c HAX-
A;Cross-references: UNIRROT:Q8X618; UNIPARC:UPI0000DD0C14; GB:BA000007; PIDN:BAB35799.1;
A;Experimental source: strain O157:H7, substrain RIMD 0509952
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C,Species: Escherichia coli
C,Date: 16-Feb-2001 #sequence_revision 16-Feb-2001 #text_change 09-Jul-2004
A;Status: nucleic acid sequence not shown; translation not shown
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C;Superfamily: Escherichia coli hypothetical protein b1669
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55.6%; Score 5; DB 2;
Best Local Similarity 100.0%; Pred. No. 62;
Matches 5; Conservative 0; Mismatches
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Matches 5; Conserv
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                                                                                                     figf protein (U95165) [imported] - Agrobacterium tumefaciens (strain C58, Cereon)
C;Species: Agrobacterium tumefaciens
C;Date: 30-Sep-2001 #sequence_revision 30-Sep-2001 #text_change 05-Oct-2004
C;Accession: A97427
R;Goodner, B.; Hinkle, G.; Gattung, S.; Miller, N.; Blanchard, M.; Qurollo, B.; Goldman, A.; Liu, F.; Wollam, C.; Allinger, M.; Doughty, D.; Scott, C.; Lappas, C.; Markelz, B.; Science 294, 233-2328, 2001
A;Title: Genome Sequence of the Plant Pathogen and Biotechnology Agent Agrobacterium tum A;Reference number: A97359; MUID:21608551; PMID:11743194
A;Status: preliminary
A;Status: preliminary
A;Residues: 1-244 «KUR»
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               hypothetical protein - Synechocystis sp. (strain PCC 6803)

G.Species: Synechocystis sp.
A;Variety PCC 6803

C.Date: 25-Apr-1997 #sequence_revision 25-Apr-1997 #text_change 09-Jul-2004

C.Accession: 875903

K.Saneko, T.; Sato, S.; Kotani, H.; Tanaka, A.; Asamizu, E.; Nakamura, Y.; Miyajima, N.;
O, K.; Okumura, S.; Shimpo, S.; Takeuchi, C.; Wada, T.; Watanabe, A.; Yamada, M.; Yasuda
DNA Res. 3, 109-136, 1996

A;Title: Sequence analysis of the genome of the unicellular cyanobacterium Synechocystis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Reference number: S74322; MUID:97061201; PMID:8905231
A; Accession: S75903
A; Status: preliminary
A; Molecule type: DNA
A; Residues: 1-247 <KANN
A; Residues: 1-247 <KANN
A; Cross-references: UNIPROT:P74268; UNIPARC:UPI00001290CE; EMBL:D90913; GB:AB001339; NID
A; Note: the nucleotide sequence was submitted to the EMBL Data Library, June 1996
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(Species: Escherichia coli
(Species: Escherichia coli
(Spacies: 12-Sep-1997 #sequence_revision 17-Sep-1997 #text_change 09-Jul-2004
(Spacession: E64924
(R;Blattner, F.R.; Plunkett III, G.; Bloch, C.A.; Perna, N.T.; Burland, V.; Riley, M.; Cc.A.; Rose, D.J.; Mau, B.; Shao, Y.
(Science 277, 1453-1462, 1997
(A;Tile: The complete genome sequence of Escherichia coli K-12.
(A;Reference number: A64720; MUID:97426617; PMID:9278503)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Cross-references: UNIPROT:034170; UNIPARC:UP100000D1464; GB:AE007869; PIDN:AAK86370.1;
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100.0%; Pred. No. 58;
iive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  55.6%; Score 5; DB 2;
100.0%; Pred. No. 57;
tive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A)Gene: AGR C 982
A)Map position: circular chromosome
C)Superfamily: rod protein flgF
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Matches 5, Conservative
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Best Local Similarity 100.
Matches 5; Conservative
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A;Reference number: A64720; MUID:97426617; PMID:9278503
A;Accession: G65002
A;Actusis preliminary; nucleic acid sequence not shown; translation not shown
A;Molecule type: DNA
A;Molecule type: DNA
A;Residues: 1-296 <BLAT>
A;Cross-references: UNIFROT:P77768; UNIPARC:UPI0000047C8B; GB:AE000319; GB:U00096; NID:g1
A;Experimental source: strain K-12, substrain MG1655
C;Superfamily: human PML-1 protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Residues: 1-300 <WAG>
A;Cross-references: UNIPROT:O44645; UNIPARC:UPI0000079677; EMBL:AF039049; PIDN:AAB94256.1
A;Experimental source: strain Bristol N2; clone K07C6
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cispecies: Haemophilus influenzae
Cispecies: Haemophilus influenzae
Cispecies: Baug-1995 #sequence_revision 18-Aug-1995 #text_change 09-Jul-2004
Cispeciesion: D64122
Rifleischmann, R.D.; Adams, M.D.; White, O.; Clayton, R.A.; Kirkness, E.F.; Kerlavage, A.; Gocayne, J.D.; Scott, J.; Shirley, R.; Liu, L.I.; Glodek, A.; Kelley, J.M.; Weidman, J.D.M.; Brandon, R.C.; Fine, L.D.; Fritchman, J.L.; Fuhrmann, J.L.; Geoghagen, N.S.M. Scith, Brandon, C.L.; McDonald, L.A.; Small, K.V.; Fraser, C.M.; Smith, H.O.; Venter, C.A.; A;Authors: Gnehm, C.L.; McDonald, L.A.; Small, K.V.; Fraser, C.M.; Smith, H.O.; Venter, C.A.; Reference number: A64000; MUID:95350630; PMID:7542800
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A;Molecule type: DNA
A;Residues: 1-304 <TIGE>
A;CosB-references: UNIPROT:P45198; UNIPARC:UP1000013AAB2; GB:U32821; GB:L42023; NID:g15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Map position: 5
C;Superfamily: Caenorhabditis transposon Tc1 hypothetical 32K protein
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hypothetical protein H11424 - Haemophilus influenzae (etrain Rd KW20)
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                                                                                                                                                                                                                                                Query Match 55.6%; Score 5; DB 2; Length 296; Best Local Similarity 100.0%; Pred. No. 67; Matches 5; Conservative 0; Mismatches 0; Indels
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Best Local Similarity
Matches 5; Conserval
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                                                                                                                               RESULT 21
G65002
Cypotherical protein b2305 - Escherichia coli (strain K-12)
Cypotherical protein b2305 - Escherichia coli (strain K-12)
Cypotherical protein a coli
Cypotes: Escherichia coli
Cypotes: 12-Sep-1997 #sequence_revision 17-Sep-1997 #text_change 31-Dec-2004
CyAccession: G65002
RyBlattner, F.R.; Plunkett III, G.; Bloch, C.A.; Perna, N.T.; Burland, V.; Riley, M.; Cc
A.; Rose, D.J.; Mau, B.; Shao, Y.
Science 277, 1453-1462, 1997
A;Title: The complete genome sequence of Escherichia coli K-12.
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A; Reference number: A88480; MUID:21074935; PMID:11206551
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A;Molecule type: DNA
A;Residues: 1-296 «STO»
A;Coss-references: UNIPROT: QBXCTO; UNIPARC: UPI0000DD0433; GB:AE005174; NID:g12516661;
A;Experimental source: strain O157:H7, substrain EDL933
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100.0%; Pred. No. 67;
tive 0; Mismatches
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100.0%; Pred. No. 67;
:ive 0; Mismatches
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C,Superfamily: human PML-1 protein
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C,Superfamily: human PML-1 protein
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Matches 5; Conservative
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Matches 5; Conservative
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A;Title: Complete genome sequence of a multiple drug resistant Salmonella enterica serova
A;Reference number: AB0502; MUID:21534947; PMID:11677608
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A.Atthorers: Kaine, B.P.; Borodovsky, M.; Xlenk, H.P.; Fraser, C.M.; Smith, H.O.; Woese, C. A; Title: Complete genome sequence of the methanogenic archaeon, Methanococcus jannaschii A, Reference number: A64300; MUID:96337999; PMID:8688087
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Cross-references: UNIPROT:Q58932; UNIPARC:UP1000013AD2A; GB:U67594; GB:L77117; NID:9155
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J. Gen. Microbiol. 134, 585-598, 1988
A; Title: Cloning, expression in Escherichia coli and nucleotide sequence of a tetracyclir A; Reference number: A46567; MUID:89036114; PMID:3053973
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                                                                                                                                                                                                        A;Residues: 1-321 <PAR>
A;Cross-references: UNIPARC:UPI00005A9BD; GB:AL513382; PIDN:CAD03364.1; PID:g16505636;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Status: preliminary; nucleic acid sequence not shown; translation not shown A;Molecule type: DNA
A;Residues: 1-343 <BUL>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C.Species: Methanococcus jannaschii
C.Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change 09-Jul-2004
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C;Species: Streptomyces rimosus
C;Date: 03-Mar.1994 #sequence_revision 03-Mar-1994 #text_change 09-Jul-2004
C;Accession: A46567
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    Methanococcus jannaschii

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Best Local Similarity 100.0%; Pred. No. 71;
Matches 5; Conservative 0; Mismatches
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A,Gene: STY4875
C,Superfamily: human PML-1 protein
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A;Molecule type: DNA
A;Residues: 1-347 <REY>
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                                                                                     A;Accession: AE1068
A;Status: preliminary
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                                                                                                                                                                     A; Molecule type: DNA
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A;Note: this species has also been called Salmonella typhi
C;Decies: 31monella enterica subsp. enterica serovar Typhi
C;Date: 09-Nov-2001 #sequence_revision 09-Nov-2001 #text_change 31-Dec-2004
C;Accession: AH0966
R;Parkhill, J; Dougan, G; James, K.D.; Thomson, N.R.; Pickard, D; Wain, J.; Churcher, th, T.; Connetton, P.; Cronin, A.; Davis, P.; Davies, R.M.; Dowd, L.; White, N.; Farrar, S.; Whoule, S; O'Gaora, P.
Nature 413, 848-852, 2001
A;Authors: Parry, C; Quail, M.; Rutherford, K.; Simmonds, M.; Skelton, J.; Stevens, K.; A;Authors: Parry, C; Quail, M.; Rutherford, K.; Simmonds, M.; Skelton, J.; Stevens, K.; A;Authors: Parry, C; Quail, M.; Pulb:11677608
A;Authors: Parliminary
A;Aolecule type: DNA
A;Stetus: preliminary
A;Molecule type: DNA
A;Crossion: Ah0966
A;Crossion: Ah0966
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A;Crossion: Ah0966
A;Crossion: Ah0966
A;Crossion: Preliminary
A;Molecule type: DNA
A;Crossion: Pullininary
A;Molecule type: DNA
A;Crossion: Preliminary
A;Molecule type: DNA
A;Crossion: Preliminary
A;Molecule type: DNA
A;Crossion: Preliminary
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ABLOGB
probable membrane protein STY4875 [imported] - Salmonella enterica subsp. enterica serov
c;Species: Salmonella enterica subsp. enterica serovar Typhi
A;Note: this species has also been called Salmonella typhi
C;Date: 09-Nov-2001 #sequence_revision 09-Nov-2001 #text_change 31-Dec-2004
C;Accession: AE1068
R;Parkhill, J; Dougan, G; James, K.D; Thomson, N.R; Pickard, D.; Wain, J.; Churcher, T. T. Connerton, P; Cronin, A; Davis, P; Davies, R.M; Dowd, L; White, N.; Farrar, S.; Moule, S.; O'Gaora, P.
Nature 413, 848-852, 2001
A;Authors: Parry, C.; Quail, M.; Rutherford, K.; Simmonds, M.; Skelton, J.; Stevens, K.;
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$48036
hypothetical protein - kiwi fruit
C;Species: Actinidia chinensis var. deliciosa (kiwi fruit)
C;Species: Actinidia chinensis var. deliciosa (kiwi fruit)
C;Date: 26-Dec-1994 #sequence_revision 27-Feb-1997 #text_change 17-Mar-1999
C;Accession: 548036
R;Ledgerr, S.E.; Gardner, R.C.
R;Ledgerr, S.E.; Gardner, R.C.
A;Tides: Cloning and characterization of five cDNAs for genes differentially expressed
A;Reference number: $48035; MUID:94355660; PMID:8075403
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A;Note: the nucleotide sequence was submitted to the EMBL Data Library, January 1994
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A;Molecule type: DNA
A;Residues: 1-317 <LED>
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100.0%; Pred. No. 71;
ive 0; Mismatches
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100.0%; Pred. No. 70;
live 0; Mismatches
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Best Local Similarity 100.
Matches 5; Conservative
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Matches 5; Conservative
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Nature 388, 539-547, 1997
A;Authors: Wallin, E.; Hayes, W.S.; Borodovsky, M.; Karpk, P.D.; Smith, H.O.; Fraser, C.h.
A;Title: The complete genome sequence of the gastric pathogen Helicobacter pylori.
A;Reference number: A64520; MUID:97394467; PMID:9252185
A;Recession: E64593
A;Ratus: preliminary; nucleic acid sequence not shown; translation not shown
A;Rolecule type: DNA
A;Residues: 1-375 < TOM>
A;Residues: 1-375 < TOM>
A;Cross-references: UNIPROT:025311; UNIPARC:UPI0000D30AB; GB:AE000572; GB:AE000511; NID:C;Superfamily: Helicobacter pylori 2-oxoacid ferredoxin oxidoreductase; 2-oxoacid ferredc C;Reywords: oxidoreductase
C;Suporfamily: Acidoreductase
C;Seywords: oxidoreductase
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C;Species: Helicobacter pylori

A;Variety: strain J99

C;Species: Helicobacter pylori

A;Variety: strain J99

C;Date: 12-Feb-1999 #sequence_revision 12-Feb-1999 #text_change 09-Jul-2004

C;Accession: G71919

R;Alm, R.A.; Ling, L.S.L.; Moir, D.T.; King, B.L.; Brown, E.D.; Doig, P.C.; Smith, D.R.;

Ives, C.; Gibson, R.; Merberg, D.; Mills, S.D.; Jiang, Q.; Taylor, D.E.; Vovis, G.F.;

Nature 397, 176-180, 1999

A;Reference number: A71800; MUID:99120557; PMID:9923682

A;Reference number: A71800; MUID:99120557; PMID:9923682

A;Reterence number: DNA

A;Reference: UNIPROT:Q92LP1; UNIPARC:UP100000D364E; GB:AE001486; GB:AE001439; NID:
A;Cross-references: UNIPROT:Q92LP1; UNIPARC:UP10000D364E; GB:AE001486; GB:AE001439; NID:
A;Experimental source: strain J99

C;Genetics:
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C;Species: Arabidopsis thaliana (mouse-aar cress)
C;Date: 02-Mar-2001 #sequence_revision 02-Mar-2001 #text_change 09-Jul-2004
C;Date: 02-Mar-2001 #sequence_revision 02-Mar-2001 #text_change 09-Jul-2004
C;Date: 02-Mar-2001 #sequence_revision 02-Mar-2001 #text_change 09-Jul-2004
Chin, C.W.; Chung, M.K.; Conn, L.; Conway, A.B.; Conway, A.R.; Creasy, T.H.; Dewar, K.; ansen, N.F.; Hughes, B.; Huizar, L.
Anture 408, 816-820, 2000
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100.0%; Pred. No. 81;
ive 0; Mismatches
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100.0%; Pred. No. 81;
iive 0; Mismatches
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Best Local Similarity 100.v
---a 5; Conservative
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Best Local Similarity 100.
Matches 5; Conservative
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| 124 FLRHP 128
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Sipecies: Helicobacter pylori

Cipecies: Helicobacter pylori

Cipecies: Helicobacter pylori

Cipecies: Helicobacter pylori

Cipecies: Helicobacter pylori

Cipecies: Helicobacter pylori

Cipecies: Helicobacter pylori

Cipecies: Helicobacter pylori

Cipecies: Helicobacter pylori

Pylori (G.; Fleischmann, R.D. Peterson, B.; Loftus, B.; Richardson, D.; Dodson, R.; Khalak, H.G.; Glodek, A.; McKenne son, J.D.; Kelley, J.M.; Cotton, M.D.; Weidman, J.M.; Fujii, C.; Bowman, C.; Watthey, L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A,Residues: 1-368 <SAT>
A,Cross-references: UNIPROT.Q43085; UNIPARC:UPI0000A9D1C; EMBL:D86180; PIDN:BAA13032.1
A,Experimental source: var. Alaska
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          anthranilate phosphoribosyltransferase (EC 2.4.2.18) - garden pea (fragment)
NyAlternate names: phosphoribosylanthranilate transferase
C;pgecies: pisum sativum (garden pea)
C;paces 23-Apr-1999 #sequence_revision 23-Apr-1999 #text_change 09-Jul-2004
C;Accession: T06460
R;Sato, N.; Kazuno, A.; Ohta, N.; Ohshima, K.
Bubmitted to the EMBL Data Library, June 1996
A;Description: Isolation of a pea cDNA for phosphoribosylanthranilate transferase.
A;Reference number: 215694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;
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                                                                                                                                                                                                                                                                                 C;Species: Caenorhabditis elegans
C;Date: 29-Oct-1999 #sequence_revision 29-Oct-1999 #text_change 09-Jul-2004
C;Accession: T34382
R;Du, Z.
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A,Map position: X
C,Superfamily: Caenorhabditis transposon Tc1 hypothetical 32K protein
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 submitted to the EMBL Data Library, December 1995
A;Description: The sequence of C. elegans cosmid T25G12.
A;Reference number: Z21515
A;Accession: T34382
A;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                             hypothetical protein T25G12.9 - Caenorhabditis elegans
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C;Keywords: glycosyltransferase, pentosyltransferase
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100.0%; Pred. No. 80;
ive 0; Mismatches
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A, Status: translated from GB/EMBL/DDBJ
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Matches 5; Conservative
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C;Genetics:
A;Geno: nrtA
Genome: plasmid
C;Superfamily: nitrilotriacetate monooxygenase
      A; Experimental source: strain C58 (Dupont)
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A,Molecule type: DNA
A,Residues: 1-415 <STO>
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65 WFLRH 69
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A,Gene: T17H7.13
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intrilotriacetate monooxygenase nrtA [imported] - Agrobacterium tumefaciens (strain C58, CiSpecies: Agrobacterium tumefaciens
C; Species: Agrobacterium tumefaciens
C; Date: 11-Jan-2002 #sequence_revision 11-Jan-2002 #text_change 09-Jul-2004
C; Accession: AC3235
R; Mood, Dw.; Setubal, J.C.; Kaul, R.; Monks, D.; Chen, L.; Wood, G.E.; Chen, Y.; Woo, I R; Mood, D.; Gillet, W.; Grant, C.; Guenthner, D.; Kutyavin, T.; Levy, R.; Li, M.; McClell; Karp, P.; Romero, P.; Zhang, S.
Science 294, 2317-2323, 2001
A; Authors: Yoo, H.; Tao, Y.; Biddle, P.; Jung, M.; Krespan, W.; Perry, M.; Gordon-Kamm,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Residues: 1-396 <RES>
A; Cross-references: UNIPROT: Q62743; UNIPARC: UPIO0000ESC7E; EMBL: U19866; NID: g644828; PID R; Cross-references: UNIPROT: Q62743; UNIPARC: UPIO0000ESC7E; EMBL: U19866; NID: g644828; PID R; Elink, W.; Konietzko, U.; Kauselmann, G.; Krug, M.; Schwanke, B.; Frey, U.; Kuhl, D. Proc. Natl. Acad. Sci. US. 3-734-5738, 1995
A; Title: Somatodendritic expression of an immediate early gene is regulated by synaptic A; Reference number: IS9386; MUID: 95296386; PMID: 7777577
A; Accession: IS9386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-208,'V',210-396 <RE2>
A;Cross-references: UNIPARC:UP100000E79AC; EMBL:Z46925; NID:G854413; PIDN:CAA87033.1; PI
C;Genetics:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         growth factor arg3.1 - rat
CiSpecies: Rattus norvegicus (Norway rat)
CiSpecies: Ca-Jul-1996 #sequence_revision 26-Jul-1996 #text_change 09-Jul-2004
CiAccession: ISB168; IS9386
RiLyford, G.L.; Yamagata, K.; Kaufmann, W.E.; Barnes, C.A.; Sanders, L.K.; Copeland, N.C
Neuron 14, 433-445, 1995
A;Title: Arc, a growth factor and activity-regulated gene, encodes a novel cytoskeleton-A;Reference number: ISB168; MUD:95161073; PMID:7857651
                                              A;Cross-references: UNIPROT:Q9CA65; UNIPARC:UPI00000A3E86; GB:AE005173; NID:g6539251; C;Genetics:
A;Gene: Fina20.17
A;Map position: 1
C;Superfamily: kinase-related transforming protein; protein kinase homology
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A;Title: The Genome of the Natural Genetic Engineer Agrobacterium tumefaciens C58.
A;Reference number: AB2577; MUID:21608550; PMID:11743193
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A;Molecule type: mRNA
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100.0%; Pred. No. 85;
tive 0; Mismatches
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C;Superfamily: rat growth factor arg3.1
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Best Local Similarity 100.
Matches 5; Conservative
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A; Molecule type: DNA
A; Residues: 1-378 <STO>
                                                                                                                                                                                                                                                                                                                                                                                                              372 FLRHP 376
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A,Status: preliminary
A,Molecule type: DNA
A,Residues: 1-415 <KUR>
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Circlesion: B86434
RiTheologis, A.; Ecker, J.R.; Palm, C.J.; Federspiel, N.A.; Kaul, S.; White, O.; Alonso, Childhoodis, A.; Ecker, J.R.; Palm, C.J.; Federspiel, N.A.; Kaul, S.; White, O.; Alonso, Childhoodis, A.; Chung, M.K.; Conn, L.; Conway, A.B.; Conway, A.R.; Creasy, T.H.; Dewar, K.; Nature 408, 816-820, 2000
A; Authors: Hunter, J.L.; Jenkins, J.; Johnson-Hopson, C.; Khan, S.; Khaykin, E.; Kim, C.C.A.; Li, J.H.; Li, Y.; Liu, X.X.; Liu, Z.A.; Luros, J.S.; Maiti, R.; Marziali, Razzo, M.; Rooney, T.; Rowley, D.; Sakano, H.
A;Authors: Salzberg, S.D.; Schwartz, J.R.; Shinn, P.; Southwick, A.M.; Sun, H.; Tallon, I A;Authors: Salzberg, S.D.; Fraser, C.M.; Venter, J.C.; Davis, R.W.
A;Authors: Salzberg, S.D.; Chamosome I of the plant Arabidopsis.
A;File: Sequence and analysis of chromosome I of the plant Arabidopsis.
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A;Note: submitted to the EMBL Data Library, July 1994
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                                                                                                                                                                                                                                                                                                                     protein T17H7.13 [imported] - Arabidopsis thaliana
C;Species: Arabidopsis thaliana (mouse-ear cress)
C;Date: 02-Mar-2001 #sequence_revision 02-Mar-2001 #text_change 09-Jul-2004
                                                               Gaps
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   Length 415;
                                                            0; Indels
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100.0%; Pred. No. 88;
iive 0; Mismatches
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Query Match 55.6%; Score 5; DB 2; Best Local Similarity 100.0%; Pred. No. 88; Matches 5; Conservative 0; Mismatches
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A,Map position: 17pter-17qter
A;Note: defects in this gene may result in Jadassohn-Lewandowsky pachyonychia congenita &
C;Superfamily: cytoskeletal keratin
C;Keywords: coiled coil
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A; Molecule type: mRNA
A; Residues: 1-456 <GIR>
A; Crose-references: UNIPROT:003849; UNIPARC:UPI00000A796F; EMBL:294180; PIDN:CAB08111.1
A; Experimental source: cultivar Bonner Beste, mutent chloronerva; roots
C; Superfamily: pyruvate dehydrogenase (lipoamide) alpha chain; thiamin pyrophosphate-bin
C; Reywords: mitcochondrion; oxidoreductase; phosphoproten
F; 1-34/Domain: transit peptide (mitcochondrion) #status predicted <INP>
F; 1-34/Domain: transit peptide (mitcochondrion) #status predicted <INP>
F; 339-286/Domain: thiamin pyrophosphate-binding domain homology <TPB>
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A;Cross-references: UNIPROT:Q9UUA5; UNIPARC:UPI000069FAF; EMBL:AL109822; PIDN:CAB52621
A;Experimental source: strain 972h-; cosmid c409
                                                                                                                                                                                    C;Species: Schizosaccharomyces pombe
C;Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change 09-Jul-2004
C;Accession: T40446
R;Lyne, M.H.; Radandream, M.A.; Barrell, B.G.; Chillingworth, T.; Churcher, C.M.
submitted to the EMBL Data Library, August 1999
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Cispecies: Homo sapiens (man)
Cispate: 06-bc-1995 #sequence revision 08-Feb-1996 #text_change 09-Jul-2004
Ciscession: JC3113; A24843; ISB129
R;Paladini, R.D; Takahashi, K.; Gant, T.M.; Coulombe, P.A.
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N;Alternate names: 46K keratin type I; cytokeratin 16
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100.0%; Pred. No. 95;
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Length 473; 0; Indels

Score 5; DB 2; Pred. No. 98; 0; Mismatches

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Biochem. Biophys. Res. Commun. 215, 517-523, 1995

A;Title: cDNA cloning and bacterial expression of the human type I keratin 16.

A;Reference number: JC4313, MUID:96011809; PMID:7487986

A;Accession: JC4313

A;Rocession: JC4313

A;Rocession: JC4313

A;Rocession: JC4313

A;Rocession: JC4313

A;Rocession: A2434

A;Title: Three tightly linked genes encoding human type I keratins: conservation of seque A;Reference number: A24843

A;Title: Three tightly linked genes encoding human type I keratins: conservation of seque A;Title: Three tightly linked genes encoding human type I keratins: conservation of seque A;Title: Three tightly linked genes encoding human type I keratins: conservation of seque A;Title: Three tightly linked genes encoding human type I keratins: conservation of seque A;Title: Three tightly linked genes encoding human type I keratins: Conservation of seque A;Title: Three tightly linked genes encoding human type I keratins: Conservation of seque A;Title: Three tightly linked genes encoding human type I keratins: Conservation of seque A;Title: Three tightly linked genes encoding human type I keratins: Conservation of seque A;Title: Roces: DNA
A;Roces: Linker, Linker, Linker, Linker, Three tightly linked genes encoding human type I keratins: Conservation of seque encoding type: DNA
A;Roces: the translated sequence in GenBank entry HUMKER1648, release 111.0, (PIDN:AAA5946.1; RUMACGENESION: 158129
A;Title: Keratin I dand keratin 17 mutations cause pachyonychia congenita.
A;Rocession: 158129 for GB/BMBL/DDBJ
A;Rocession: 158129 for GB/BMBL/DDBJ
A;Rocession: Sequence
C;Comment: This protein is an intermediate filament protein and expressed in epithelial telements of BB/GBRL congenita:
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                                                                                                                       Search time 139.25 Seconds (without alignments) 59.786 Million cell updates/sec
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Q82hv8
Q2wj35
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0202LR3_RRAW
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02KS22_ADE05
03WDX0_9ACTO
040KB8 HARE18
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                                                                                                                     2006, 10:29:54;
                                                                                     sw model
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2: uniprot_trembl:*
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RNULECOIDE SEQUENCE [LARGE SCALE GENOMIC DNA].

RY UNCLECOIDE SEQUENCE [LARGE SCALE GENOMIC DNA].

RY BURNA-PH-1 / NRRL 31084;

RA Arachchi H.M., Barna N., Bastien V., Bloom T., Boguslavkiy L.,

RA Arachchi H.M., Barna N., Bastien V., Bloom T., Boguslavkiy L.,

RA Arachchi H.M., Barna N., Bastien V., Bloom T., Boguslavkiy L.,

RA Choepel Y., Collymore A., Cook A., Cooke P., Corum B., DeArellano K.,

RA Diaz J.S., Dodge S., Doley K., Dorris L., Elkins T., Engels R.,

RA Erickson J., Ferreira P., FitzGerald M., Gage D.,

RA Hafez N., Hagopian D., Hagos B., Hall J., Horton L., Hulme W.,

RA Iliev I., Jaffe D., Johnson R., Jones C., Kamal M., Kamat A.,

RA Lui A., Ma L.-J., Mabbitt R., MacLean C., Macdonald P., Major J.,

RA Manning J., Mathews C., Landers T., Levine R., Lindlad-Toh K., Liu G.,

RA Manning J., Mathews C., Mauceli E., McCarthy M., Meldrim J.,

RA Micol R., Nielsen C.B., Norbu V., Murphy T., Naylor J., Nguyen C.,

RA Nicol R., Nielsen C.B., Norbu W., Phunkhang P., Pierre N.,

RA Rogov P., Roman J., Schauer S., Schubback R., Seaman S., Severy P.,

RA Smirnov S., Smith C., Spencer B., Stange-Thomann N., Stojanovic N.,

RA Vessiliev H., Venkataraman V.S., Viel R., Vo A., Wang S., Wilson B.,

RA Lander R.S.;

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Submitted (FBE-2004) to the EMBL/GenBank/DDBJ databases.
-!- CAUTION: The sequence shown here is derived from an
EMBL/GenBank/DDBJ whole genome shotgun (WGS) entry which is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gibberella zeae (Fusarium graminearum).
Eukaryota; Fungi; Ascomycota; Pezizomycotina; Sordariomycetes;
Hypocreomycetidae; Hypocreales; Nectriaceae; Gibberella.
NCBI_TaxID=5518;
                                                                                                    EMBL, CP000009, AAW61446.1; -; Genomic_DNA.

GO, GO:0016797; P:hydrolase activity; IEA.

GO, GO:0016797; P:hydrolase activity; IEA.

GO, GO:008152; P:metabolism; IEA.

InterPro; IPR013209; CDC = UNCACONG, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO, INDO,
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16-AUG-2005, sequence version 1.
07-PRB-2006, entry version 4.
ORPHOCHACICAL protein.
ORFNames=FGG0026.1;
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1D OSFQAO.

DT 01-MAR-2005, integrated into UniProtKB/TrEMBL.

DT 01-MAR-2005, sequence version 1.

DT 01-MAR-2005, sequence version 6.

DE Putative hydrolase of the HAD superfamily.

ON-FEB-2006, entry version 6.

DE Putative hydrolase of the HAD superfamily.

ON Orderedocusmans-SCAX1706,

OS Gluconobacter oxydans (Gluconobacter suboxydans).

OC Acetobacteraceae; Gluconobacter.

ON CBI_TAXID=442;

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NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].

RC STRAIN=521H;

RX PUNGLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].

RC STRAIN=521H;

RX PUNGLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].

RC STRAIN=521H;

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RC STRAIN=521H;

RX PUNGLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].

RC STRAIN=51H;

RX PUNGLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].

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PubMed=15665824; DOI=10.1038/nbt1062;
PrubMed=15665824; DOI=10.1038/nbt1062;
PrubH C., Hoffmeister M., Liesegang H., Wiezer A., Fricke W.F.,
Bhrenreich A., Gottschalk G., Deppenmeier U.;
"Complete genome sequence of the acetic acid bacterium Gluconobacter
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057NWS_SALCH
057NWS_SALCH
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05870S_SALTI
05810S_CS_SALTI
031852_MOUSE
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06MSK2_MXCMS

053T67_HUMAN

05D6B8_PRRSV

09L0W3_STRCO

130_BUCBP

013MLD_RHOS4

0474RS_RALEJ
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03PK90_PARDE
03Z222_SHISS
08K618_ECO57
08FH64_ECOL6
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Q5DB61_SCHJA
Q8S5C9_ORYSA
YDHT_ECOLI
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Natl. Acad. Sci. U.S.A. 100:4903-4908(2003)
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Suwa M., Sato T., Okouchi I., Arita M., Futami K., Matsumoto S.,
Tsutsumi S., Aburatani H., Asai K., Akiyama Y.,
"Genome-wide discovery and analysis of human seven transmembrane helix
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini, Hominidae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE-22887296; PubMed=12975309; DOI=10.1101/gr.1293003; Clark H.F., Gurney A.L., Abaya E., Baker K., Baldwin D.T., Brush J., Chen J., Chow E., Chul C., Crowley C., Currell B., Deuel B., Dowd P., Eaton D., Foster J.S., Grimaldi C., Gu Q., Hass P.E., Heldens S., Huang A., Kim H.S., Klimowski L., Jin Y., Johnson S., Lee J., Lewis L., Liao D., Mark M.R., Robbie E., Sanchez C., Schoenfeld J., Seshagiri S., Simmons L., Singh J., Smith V., Stinson J., Vagts A., Vandlen R.L., Watanabe C., Wieand D., Woods K., Xie M.-H., Yansura D.G., Yi S., Yu G., Yuan J., Zhang M., Zhang Z., Goddard A.D., Wood W.I., Godowski P.J., Gray A.M.;
"The secreted protein discovery initiative (SPDI); a large-scale effort to identify novel human secreted and transmembrane proteins: a bioinformatics assessment.""
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MEDLINE=22040266; PubMed=12044878; DOI=10.1016/S0014-5793(02)02775-8;
Takeda S., Kadowaki S., Haga T., Takaesu H., Mitaku S.;
"Identification of G protein-coupled receptor genes from the human
                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                  GPI13 HUMAN STANDARD,

QBIZEF; GGNT7; GUNXX; QBGSL7; QBIXDB; QBTDT3;

15-FEB-2005, integrated into UniProtKB/Swiss-Prot.

01-MAR-2006, entry version 1.

07-MAR-2006, entry version 25.

receptor PGN23;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUCLEOTIDE SEQUENCE [MRNA] (ISOFORM 1).
PubMed=12435584; DOI=10.1016/S0014-5793(02)03574-3;
FredTiksson R., Lagerstroem M.C., Hoeglund P.J., Schioeth H.B.;
Novel human G protein-coupled receptors with long N-terminals containing GPS domains and Ser/Thr-rich regions.";
FEBS Lett. 531:407-414(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA] (ISOFORM 2), AND VARIANT
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                                                                                                 Length 405;
                                                                                                                                          0; Indels
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Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Name=GPR113; Synonyms=PGR23; ORFNames=UNQ9196/PRO34000;
Homo sapiens (Human).
EMBL; AACM01000002; EAA69365.1; -; Genomic_DNA.
Complete proteome; Hypothetical protein.
SEQUENCE 405 AA; 43960 MW; SE275BB334F6AE3E CRC64;
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                                                                                            DB 2;
                                                                                          66.7%; Score 6; DB 2
100.0%; Pred. No. 65;
ive 0; Mismatches
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                                                                 Query Match
Best Local Similarity 100.00
Best Local 6; Conservative
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EMBL, AY255611; AA085123.1; -; mRNA.
Ensembl; BNSG0000173567; Homo sapiens.
HGNC; HGNC:1899; GFR13.1;
GO; GO:0016021; C:integral to membrane; TAS.
GO; GO:0004930; F:G-protein coupled receptor activity; TAS.
GO; GO:0007186; P:G-protein coupled receptor protein signalin. .; TAS.
InterPro; IPR00032; GPCR secretin.
InterPro; IPR00032; GPCR secretin.
Pfam; PF00002; 7fm_2; II.
Pfam; PF01825; GPS_1.
                                                                                                                                                                                                                                                                                                                                                 Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms Distributed under the Creative Commons Attribution-NoDerivs License
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Probable G-protein coupled receptor 113.

/FTIG=PRO 000012893.

Extracellular (Potential).

Cytoplasmic (Potential).

Extracellular (Potential).

Syctential).

Cytoplasmic (Potential).

Cytoplasmic (Potential).

Cytoplasmic (Potential).

Cytoplasmic (Potential).

Extracellular (Potential).
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RRQWGPLIGRDKAWNERIDRPFPACPIPLSSSFGRWPKGQT
MWAQTSTLTLTEEEL -> MTTRKLSAHSAATPGYKAVTHK
                                                                                                                                                                                                                                        LN-TM7 subfamily.
-!- SIMILARITY: Contains 1 GPS domain.
-!- CAUTION: Ref.2 sequence differs from that shown due to erroneous gene model prediction.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Membrane; Polymorphism; Receptor; Signal; Transducer; Transmembrane.
SIGNAL 1 25
                                                                                                                                                                                                                     SIMILARITY: Belongs to the G-protein coupled receptor 2 family
                                                                                                                                                   IsoId=Q8IZF5-2; Sequence=VSP 012815, VSP 012816, VSP 012817;
Note=Ref.3 (AAQ88581) sequence is in conflict in position:
-i- FUNCTION: Orphan receptor.
-i- SUBCELLULAR LOCATION: Membrane, multi-pass membrane protein.
-i- ALTERNATIVE PRODUCTS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (Potential)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  splicing, G-protein coupled receptor; Glycoprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (Potential)
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6 (Potential).
Extracellular (Potential).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL, AY358214; AAQ88581.1; -; Other RNA.
EMBL; AB083619; BAB89332.1; ALT INIT; Genomic_DNA.
EMBL; AY255611; AAO85123.1; -; mRNA.
                                                                Event=Alternative splicing; Named isoforms=2;
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                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; AY140955; AAN46669.1; -; mRNA.
EMBL; AB065959; BAC45265.1; ALT SEQ; Genomic_DNA.
EMBL; AY358172; AAQ88539.1; -; mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (GlcNAc.
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SMART; SM00303, GPS, 1.
PROSTER; PS00649, G PROTEIN RECEP F2 1; FA
PROSITE; PS00650, G PROTEIN RECEP F2 2; 1.
PROSITE; PS50227, G PROTEIN RECEP F2 3; 1.
PROSITE; PS50261, G PROTEIN RECEP F2 3; 1.
PROSITE; PS50221, GPS, 1.
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                                                                                           .me=1;
IsoId=Q8IZF5-1; Sequence=Displayed;
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N-linked
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STRAIN=74-0R23-1A / FGSC 987;
MEDLINE=22598136; PubMed=1271197; DOI=10.1038/nature01554;
Magling=22598136; PubMed=1271197; DOI=10.1038/nature01554;
Maglingan J.E., Calvo S.E., Borkovich K.A., Selker B.U., Read N.D.,
Jaffe D., FitzHugh W., Ma L.-J., Smirnov S., Purcell S., Rehman B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Fungi; Ascomycota; Pezizomycotina; Sordariomycetes;
Sordariomycetidae; Sordariales; Sordariaceae; Neurospora.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota, Pungi, Ascomycota, Pezizomycotina, Sordariomycetes,
Sordariomycetidae, Sordariales, Sordariaceae, Neurospora.
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                                                                                                                                                                                                                                                 Score 6; DB 2; Length 1079;
Pred. No. 1.4e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; ALG70004; CAD21248.1; -; Genomic_DNA.
Hypothetical protein.
SEQUENCE 1093 AA; 120695 MW; 9F6BF07A8AD661BD CRC64;
                                                                                                                                                                                                                                                                                                            0; Indels
                                                                                                                                                                                           1079 AA; 116341 MW; A18CA158F4DDBB9C CRC64;
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Submitted (JAN-2002) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-MAR-2002, integrated into UniProtKB/TrEMBL. 01-MAR-2002, sequence version 1. 07-FBE-2006, entry version 9. Hypothetical protein 5E6.080. Name=5E6.080;
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15-DEC-2003, sequence version 1.
07-FEB-2006, entry version 9.
                                                                                                                                                                                                                               66.7%; Scor.
100.0%; Pred. No. 1...
0; Mismatches
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erUSITE; PS50227; G PROTEIN RECEP F2 3; 1. PROSITE; PS50261; G PROTEIN_RECEP_F2_4; 1. Hypothetical protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
                                                                                                                                                                                                                                                                     Best Local Similarity 100.
Matches 6; Conservative
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Best Local Similarity 100.
Matches 6; Conservative
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ORFNames=NCU08869.1;
Neurospora crassa.
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QBXORO;
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Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                  | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MISTAGENCE | MIS
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Ensembl; ENSG0000173567; Homo sapiens.
G0; G0:0016020; C:membrane; IEA.
G0; G0:0007218; P:neuropeptide signaling pathway; IEA.
InterPro; IPR01303; EGF like.reg.
InterPro; IPR001832; GPF like.reg.
InterPro; IPR001879; hormone_rcpt.
InterPro; IPR001879; hormone_rcpt.
InterPro; IPR001879; hormone_rcpt.
InterPro; IPR001879; hormone_rcpt.
Ffam; PF001825; GPFR_SECTETIN.
Ffam; PF001825; GPFR_SECTETIN.
Fran; SN00183; GPFR_SECTETIN.
FRINTS; N000183; GPFR_SECTETIN.
FRINTS; SN00186; GFF 22; UNKNOWN_1.
FROSITE; PS01186; GFF 22; UNKNOWN_1.
                                                                                HHTGWARMAKTGLPEK (in isoform 2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 1; Length 1079; 1.4e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Indels
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Swearengen S., Cordes M., Cotton M.;
"The sequence of Homo sapiens BAC clone RP11-499P9.";
Submitted (SEP-1999) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Submitted (APR-2005) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Waterston R.H.;
Submitted (SEP-1999) to the EMBL/GenBank/DDBJ databases
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           24-MAY-2005, integrated into UniProtKB/TrEMBL. 24-MAY-2005, sequence version 1. 27-EBB-2006, entry version 3. Hypothetical protein GPR113.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   66.7%; Score 6; DB 1
100.0%; Pred. No. 1.4
:ive 0; Mismatches
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Lag 6; Conservative
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NCBI_TaxID=9606;
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QS3TAS_HUMAN
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29 AA; 3169 MW; SFB2DCF7AA4626ED CRC64;
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Best Local Similarity
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ID Q71136 LACDL
AC Q71136;
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QBA2T7;
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                  SEQUENCE
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Cui D., Ianakiev P., Ball-Pederson D., Nelson M.A.,

Werner-Washburne M., Selitrennikoff C.P., Kinsey J.A., Braun E.L.,

Rater A., Schulte U., Kothe GO., Jedd G., Mewes H.-W., Staben C.,

A Marcotte E., Greenberg D., Roy A., Foley K., Naylor J.,

Rasmussen C., Merzenberg R.L., Frishman D., Krystofova S.,

Rasmussen C., Merzenberg R.L., Perkins D.D., Kroken S.,

Rasmussen C., Merzenberg R.L., Perkins D.D., Kroken S.,

Rasmussen C., Merzenberg R.L., Perkins D.D., Kroken S.,

Rasmussen C., Merzenberg R.L., Denhap J.C., Radford-A., Aramayo R.,

Parden O., Plamann M., Seiler S., Dunlap J.C., Radford-A., Aramayo R.,

Narden O., Plamann M., Seiler S., Dunlap J.C., Radford-A., Aramayo R.,

Narden O., Alex L.A., Mannhaupt G., Ebbole D.J., Freitag M.,

Paulsen I., Sachs M.S., Lander E.S., Nusbaum C., Birren B.W.,

The genome sequence of the filamentous fungus Neurospora crassa.";

L. Nature 422:859-868(2003).

C. CAUTION: The sequence shown here is derived from an EMBL, Aramann M. Seller B. S., Nusbaum C., Birren B.W.,

EMBL/Genbank/DBJ whole genome shotgun (WGS) entry which is
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STRAIN=CLIB 122 / E 1576.05 State Service Days .

A PubMed=1522959; DOI=10.1038/nature02579;

Dujon B., Sherman D., Fischer G., Durenne P., Casaregola S.,

Lafontaine I., de Montigny J., Marck C., Neuveglise C., Talla E.,

A Goffard N., Frangeul L., Aigle M., Anthouard V., Babour A., Barbe V.,

A Barnay S., Blanchin S., Beckerich J.-M., Beyne B., Bleykasten C.,

A Boistrame A., Boyer J., Cattolico L., Confanioleri F., de Daruvar A.,

A Boistrame A., Boyer J., Cattolico L., Ferry-Dumazet H., Groppi A.,

A Hantraye F., Hannequin C., Jauniaux N., Joyet P., Kachouri R.,

A Kerrest A., Koszul R., Lemaire M., Lesur I., Ma L., Muller H.,

Nicaud J.-M., Nikolski M., Oztas S., Ozier-Kalogeropoulos O.,

A Pellenz S., Potier S., Richard G.-F., Straub M.-L., Suleau A.,

Swennen D., Tekaia F., Wesolowski-Louvel M., Westhof E., Wirth B.,

Zeniou-Meyer M., Zivanovic Y., Bolotin-Pukuhara M., Thierry A.,

Michael C., Caudron B., Scarpelli C., Gaillardin C., Weissenbach J.,

Michael C., Caudron B., Scarpelli C., Gaillardin C., Weissenbach J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms Distributed under the Creative Commons Attribution-NoDerivs License
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Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes;
Saccharomycetales; Dipodascaceae; Yarrowia.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; AABX01000300; EAA31426.1; -; Genomic DNA.
SEQUENCE 1117 AA; 123343 MW; 1988B0BCD607752D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     16-AUG-2004, integrated into UniProtKB/TrEMBL.
16-AUG-2004, sequence version 1.
07-FEB-2006, entry version 12.
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Nature 430:35-44(2004).
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Best Local Similarity 100.0.
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QecGE3;
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Distributed under the Creative Commons Attribution-NoDerivs License
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN=VPI-5482 / ATCC 29148;
MBDLINE=22550858; PubMed=12653928; DOI=10.1126/science.1080029;
XU J., Bjursell M.K., Himrod J. Deng S., Carmichael L.K.,
Chiang H.C., Hooper L.V., Gordon J.I.;
"A genomic view of the human-Bacteroides thetalotaomicron symblosis.";
                                                                    Gaps
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                                                                    Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Lactobacillus delbrueckii subsp. lactis.
Bacteria; Firmicutes; Lactobacillales; Lactobacillaceae;
Lactobacillus.
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Langenheim J.F., Ulrich R.L.;
Submitted (MAR-2002) to the EMBL/GenBank/DDBJ databases.
                   Length 29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; AE015928; AAO78324.1; -; Genomic_DNA.
BioCyc; BTHE22618:BT3128-MONDRER: -.
Complete protecome; Hypothetical protein.
SEQUENCE 77 AA; 9164 MW; 115052AB1896BA18 CRC64;
                Score 5; DB·2; Le
Pred. No. 1.3e+02;
                                                                                                                                                                                                                                                                                                                                                  01-JUN-2003, integrated into UniProtKB/TrEMBL. 01-JUN-2003, sequence version 1. 07-FBB-2006, entry version 9.
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55.6%; Scor.
100.0%; Pred. No. 1...
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OrderedLocusNames=BT3218; ORFNames=BT_3218;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bacteroides thetaiotaomicron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Science 299:2074-2076(2003).
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NCBI_TaxID=818;
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Similarity 100.
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MUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].
STRAIN-C2A / ATCC 35395 / DSM 2834;
MEDLINE-21929760; PubMed=11932238; DOI=10.1101/gr.223902;
Galagan J.E., Nusbaum C., Roy A., Endirizzi M.G., Macdonald P.,
FitzHugh W., Calvo S., Engels R., Smirnov S., Atnoor D., Brown A.,
Allen N., Naylor J., Stange-Thomann N., DeArellano K., Johnson R.,
Linton L., McEwan P., McKernan K., Talamas J., Tirrell A., Ye W.,
Linton L., Astrony C., Cann I., Graham D.E., Grahame D.A., Guss A.M.,
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Methanosaucīna acetivorans.
Archaea; Buryarchaeote; Methanomicrobia; Methanosarcinales;
Methanosarcinaceae; Methanosarcina.
                                                                DB 2; Le._
Jo. 2.8e+02;
0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; CP000099; AAZ71052.1; -; Genomic DNA.
Complete proteome; Hypothetical protein.
SEQUENCE 80 AA; 9187 MW; 2DD0ED9A5ESC4CB3 CRC64;
                           SE609E1F96CFFD10 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               [1]
NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].
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01-JUN-2002, sequence version 1.
01-KAR-2006, entry version 11.
Hypothetical protein.
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                                                                               Similarity 100.0%; Score 5; DB 2
Similarity 100.0%; Pred. No. 2.8
5; Conservative 0; Mismatches
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100.0%; Pred. No. 2.8
:ive 0; Mismatches
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07-FEB-2006, entry version 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OrderedLocusNames=Mbar_A2121;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             07-FEB-2006, entry version 4. Hypothetical protein.
79 79
79 AA; 9042 MW;
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                                                                                                             Local Similarity
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Q46APO;
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Hedderich R., Ingram-Smith C., Kuettner H.C., Krzycki J.A., Leigh J.A., Li W., Liu J., Mukhopadhyay B., Reeve J.N., Smith K., Springer T.A., Umayam L.A., White O., White R.H., de Macario E.C., Ferry J.G., Jarrell K.F., Jing H., Macario A.J.L., Paulsen I.T., Pritchett M., Sowers K.R., Swanson R.V., Zinder S.H., Lander E., Metcalf W.W., Birren B.,
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"Pleidtorpoic effect of arsenic stress on Cenibacterium arsenoxidans, metalloresistant beta-proteobacterium.";
Submitted (AUG-2004) to the EMBL/GenBank/DDBJ databases.
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Complete protecome; Hypothetical protein.

SEQUENCE 80 AA; 9184 MW; DF02721324F5D173 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; AE010299; AAM07474.1; -; Genomic_DNA.
GenomeReviews; AE010299 GR; MA4126.
BioCyc; MACE188937;MA4126-MONOMER; -.
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QPMISS_9TELE PRELIMINARY; PR:
QPMISS_010CT-2000, integrated into Unii
01-OCT-2000, sequence version 1.
                                                                                                                                                                                                                        and physiological diversity.";
Genome Res. 12:532-542(2002).
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US DOE Joint Genome Institute (JGI-ORNL);
US DOE Joint Genome Institute (JGI-ORNL);
US DOE Joint Genome of Rhodopseudomonas palustris BiBB5.";
"Annotation of the draft genome of Rhodopseudomonas palustris BiBB5.";
Submitted (OCT-2005) to the EMBL/Genbank/DDBJ databases.
-!- CAUTION: The sequence shown here is derived from an EMBL/Genbank/DDBJ whole genome shotgun (WGS) entry which is
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US DOE Joint Genome Institute (JGI-PGF);
Copeland A., Lucas S., Lapidus A., Barry K., Detter J.C., Glavina T., Hammon N., Israni S., Pitluck S., Richardson P.;
Sequencing of the draft genome and assembly of Rhodopseudomonas palustris BisB5.";
                                      US DOE Joint Genome Institute;

Copeland A., Lucas S., Lapidus A., Barry K., Detter J.C., Glavina T., Hammon N., Israni S., Pitluck S., Bryant D., Schmutz J., Larimer F., Lund M., Kyrpides N., Ivanova N., Richardson P.;

"Complete sequence of Pelodictyon luteolum DSM 273.";
Submitted (AUG-2005) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OKFNAMES-RPDDEAFT-1705,
Rhodopseudomonas palustris BisB5.
Bacteria, Proteobacteria, Alphaproteobacteria, Rhizobiales,
Bradyrhizobiacese, Rhodopseudomonas.
NCBI_TaxID=316057;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      55.6%; Score 5; DB 2; Length 101; 100.0%; Pred. No. 3.4e+02; iive 0; Mismatches 0; Indels
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Best Local Similarity 100.0%; Pred. No. 3.5e+02;
Matches 5; Conservative 0; Mismatches 0; Indels
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                                                                                                                                                                                                                                                                                                                                                                         Hypothetical protein.
SEQUENCE 101 AA; 11173 MW; AAEF2D3DE11B891C CRC64;
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SEQUENCE 108 AA; 11908 MW; 5DD8C5B4A85507BD CRC64;
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07-FEB-2006, entry version 3.
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Q37HR3;
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NOTICE STITISTICS SEQUENCE.

WARDLINE-22111806; Pubmed=12116439; DOI=10.1080/106351500750049824;

WARDLINE-22111806; Pubmed=12116439; DOI=10.1080/106351500750049824;

WARDLINE-22111806; Pubmed=12116439; DOI=10.1080/106351500750049824;

WARDLINE-22111806; Pubmed=1: d. P. P.

Lepidogalaxias salamandroides.;

WAST. Biol. 49:777-795(2000).

Lepidogalaxias salamandroides.;

Syst. Biol. 49:777-795(2000).

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22-NOV-2005, sequence version 1.
07-FEB-2006, entry version 3.
Hypothetical protein.
ORFNames=Plut_1094,
Polodictyon luteolum (strain DSM 273) (Chlorobium luteolum (strain DSM)
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                                                                                                                   Mitochondrion.

Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;

Actinopterygii, Neopterygii; Teleostei; Buteleostei;

Protacanthopterygii; Salmoniformes; Retropinnidae; Retropinna.

NCBI_TaxID=89573;
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GO; GO:0016020, C:membrane; IEA.
GO; GO:0005746, C:mitochondrial electron transport chain; IEA.
GO; GO:0005739; C:mitochondrian; IEA.
GO; GO:0005806; F:iron ion binding; IEA.
GO; GO:0016491; F:emeral ion binding; IEA.
GO; GO:0016491; F:emeral ion binding; IEA.
GO; GO:0016491; F:electron transport; IEA.
HINE-EPRO; IPROS79; CYtb b6.
InterPro; IPROS79; CYtb b6.
PROSITE; PSS1002; CYTB_NTER; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Electron transport; Heme; Iron; Metal-binding; Mitochondrion;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            55.6%; Score 5; DB 2; Length 95; 100.0%; Pred. No. 3.2e+02; ive 0; Mismatches 0; Indels
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SMR; Q9MISS; 1-95.
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07-FEB-2006, entry version 21.
Cytochrome b (Fragment).
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Matches 5; Conservative
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                                                                                                                                                                                                                                                                                                                                   STRAIN-HaA2;
US DOE Joint Genome Institute;
US DOE Joint Genome Institute;
Copeland A., Lucas S., Lapidus A., Barry K., Detter J.C., Glavina T., Hammon N., Israni S., Pitluck S., Chain P., Malfatti S., Shin M., Vergez L., Schmutz J., Larimer F., Land M., Hauser L., Pelletier D.A., Kyrpides N., Anderson I., Oda Y., Harwood C.S., Richardson P.;
"Complete sequence of Rhodopseudomonas palustris HaA2.";
Submitted (JAN-2006) to the EMBL/GenBank/DDBJ databases.
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Sakaki Y., Hattori M., Omura S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Complete genome sequence and comparative analysis of the industrial microorganism Streptomyces avermitilis.";
Nat. Biotechnol. 21:526-531(2003).
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STRAIN=MA-4680 / ATCC 31267 / NCIMB 12804 / NRRL 8165;
MEDLINE=21477403; Pubmed=11572948; DOI=10.1073/pnas.211433198;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bacteria; Actinobacteria; Actinobacteridae; Actinomycetales;
Streptomycineae; Streptomycetaceae; Streptomyces.
                                                                                                                                                                                                Rhodopseudomonas palustris HaA2.
Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales;
Bradyrhizobiaceae; Rhodopseudomonas.
NOSE_TaxID=316058;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 2; Length 108;
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STRAIN=MA-4680 / ATCC 31267 / NCIMB 12804 / NPRL 8165;
MEDLINE=22608306; PubMed=12692562; DOI=10.1038/nbt820;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hypothetical protein.
SEQUENCE 108 AA; 12049 MW; 235632516D148B20 CRC64;
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                                                                                  07-MAR-2006, integrated into UniprotKB/TrEMBL. 07-MAR-2006, sequence version 1. 07-MAR-2006, entry version 1. 07-MAR-2006, entry version 1. 08FNames=RPB_0578;
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100.0%; Pred. No. 3.5
ive 0; Mismatches
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                                            PRELIMINARY;
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                     M1_RHOPA
Q2J2M1_RHOPA
Q2J2M1;
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Q82LF3;
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                                                            EMBL; BA000030; BAC69768.1; -; Genomic_DNA.
BioCyc; SAVE227882:SAV2057-MONOMER; -.
GO; GO:0003677; F:DNA binding; IEA.
GO; GO:0006355; P:regulation of transcription, DNA-dependent; IEA.
GO; GO:0006350; P:transcription; IEA.
InterPro; IPR011991; Wing hix DNA bd.
Complete proteome; DNA-binding; Hypothetical protein; Transcription;
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MEDLINE=8105684; PubMed=1142161;
Gingeras T.R., Sciaky D., Gelinas R.E., Bing-Dong J., Yen C.E.,
Kelly M.M., Bullock P.A., Parsons B.L., O'Neill K.E., Roberts R.J.;
"Nucleotide sequences from the adenovirus-2 genome.";
J. Biol. Chem. 257:13475-13491(1982).
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07-WAR-2006, entry version 1.
07-WAR-2006, entry version 1.
Hypotherical 12 kDa early protein.
Hypotherical 12 kDa early protein.
Human adenovirus 5 (HAdV-5).
Viruses; dsDNA viruses, no RNA stage; Adenoviridae; Mastadenovirus.
[1]
NCBI TaxID=28285;
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21-JUL-1986, sequence version 1.
07-F2B-2006, entry version 21.
Hypothetical protein E-115.
Human adenovirus 2 (HAdV-2).
Viruses; dsDNA viruses, no RNA stage; Adenoviridae; Mastadenovirus.
NCBI_TAXID=10515;
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/FTId=PRO 0000221918.
C7A08EAZ39B8FD98 CRC64;
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PIR; A03862; A03862.
Hypothetical protein.
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Query Match
Best Local Similarity 100.v.
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SEQUENCE 109 AA; 12127
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                                                                            61 FLRHP 65
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                              5 FLRHP 9
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Copeland A., Lucas S., Lapidus A., Barry K., Detter C., Glavina T., Hammon N., Israni S., Pitluck S., Richardson P., "Sequencing of the draft genome and assembly of Frankia sp. EANIpec.";
                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
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"Annotation of the draft genome assembly of Frankia sp. EANlpec.";
Submitted (JUN-2005) to the EMBL/GenBank/DDBJ databases.
-!- CAUTION: The sequence shown here is derived from an EMBL/GenBank/DDBJ whole genome shotgun (WGS) entry which is
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                 STRAIN=NHRC Ad5FS 7151;
Epidemic Outbreak Surveillance (EOS);
Tibbetts C., Purkayaetha A., Su J., Russell K., Carlisle S., Ospina R., Reynolds T., Rowley R., Hanson E., Seto D.;
"The complete nucleotide sequence and genome organization of adenovirus serotype 5, field strain.";
Submitted (APR-2004) to the EMBL/GenBank/DDBJ databases.
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Bacteria; Actinobacteria; Actinobacteridae; Actinomycetales;
Frankineae; Frankiaceae; Frankia.
NCBI_TaxID=298653;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Sequencing of the draft genome and assembly of Frankia Submitted (JUN-2005) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                    Hypothetical protein.
SEQUENCE 115, AA; 12210 MW; DF1B2DA239AA7F08 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13148 MW; 8EEA8775EFE424AD CRC64;
                                                                                                                                                                                                                                                                                                                                                                                            55.6%; Score 5; DB 2; Le 100.0%; Pred. No. 3.7e+02;
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GO; GO:0020037; F:heme binding; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GO; GO:0020037; F:heme binding; IEA.
GO; GO:0005506; F:iron ion binding; IEA.
GO; GO:0004497; F:monooxygenase activity; IEA.
GO; GO:0006118; P:electron transport; IEA.
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                                                                                                                                                                                                                                                                                        EMBL; AY601635; AAW65500.1; -; Genomic_DNA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRAIN=EAN1pec;
US DOE Joint Genome Institute (JGI-PGF);
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InterPro; IPR001128; Cytochrome_P450.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY; PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11-OCT-2005, integrated into Unil
11-OCT-2005, sequence version 1.
07-FEB-2006, entry version 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Putative cytochrome P450.
ORFNames=Franean1DRAFT_5182;
                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity 100.
Matches 5; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro; IPR001128; C
PRINTS; PR00359; BP450
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Distributed under the Creative Commons Attribution-NoDerivs License
                                                                                                                                                                                                                                                                                               NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].
PubMed=15968074; DOI=10.1128/JB.187.13.4627-4636.2005;
Harrison A., Dyer D.W., Gillaspy A., Ray W.C., Mungur R., Carson M.B.,
Zhong H., Gipson J., Gipson M., Johnson L.S., Lewis L., Bakaletz L.O.,
Munson R.S.
                                                                                                                                                                                                                                                                                                                                                                                                                                   "Genomic sequence of an otitis media isolate of nontypeable
Haemophilus influenzae: comparative study with H. influenzae serotype
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
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0
                                                                                                                                                                   Haemophilus influenzae (strain 86-028NP).
Bacteria; Proteobacteria; Gammaproteobacteria; Pasteurellales;
Pasteurellaceae; Haemophilus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Rabus R., Kube M., Heider J., Beck A., Heitmann K., Widdel F., Reinhardt R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Azoarcus sp. (strain EbN1).
Bacteria; Proteobacteria; Betaproteobacteria; Rhodocyclales;
Rhodocyclaceae; Azoarcus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               55.6%; Score 5; DB 2; Length 118; 100.0%; Pred. No. 3.8e+02; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  118 AA; 13822 MW; 9FCB660420C82E38 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OrderedLocusNames=AZOSEA13290; ORFNames=ebA2387;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PubMed=15551059; DOI=10.1007/800203-004-0742-9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   04-JAN-2005, integrated into UniProtKB/TrEMBL, 04-JAN-2005, sequence version 1. PFEB-2006, entry version 8. Hypothetical protein.
                                                  19-JUL-2005, integrated into UniProtKB/TrEMBL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA]
  118 AA.
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GO; GO:0003677; F:DNA binding; IEA.
GO; GO:0015074; F:DNA integration; IEA.
GO; GO:0006310; P:DNA recombination; IEA.
  PRT;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     d, strain KW20.";
J. Bacteriol. 187:4627-4636(2005)
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Arch. Microbiol. 183:27-36(2005).
                                                                         19-JUL-2005, sequence version 1. 07-FEB-2006, entry version 5. Putative integrase/recombinase.
PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRELIMINARY;
                                                                                                                                                      OrderedLocusNames=NTHI1711;
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NUCLEOTIDE SEQUENCE.
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Matches 5; Conserv
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                                                   factors."
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090ZZ6_XENTR
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WOCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].

WOCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].

US DOE Joint Genome Institute;

Copeland A., Lucas S., Lapidus A., Barry K., Detter J.C., Glavina T.,
Hammon N., Israni S., Pitluck S., Di Bartolo G., Chain P., Schmutz J.,
Larimer F., Land M., Lykidis A., Richardson P.;

"Complete sequence of Thermobifida fusca Xx.";

Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN=SCRI 1043 / ATCC BAA-672;
PubMed=15263089; DOI=10.1073/pnas.0402424101;
Bell K.S., Sebaihia M., Pritchard L., Holden M.T.G., Hyman L.J.,
Holeva M.C., Thomson N.R., Bentley S.D., Churcher L.J.C., Mungall K.,
Atkin R., Bason N., Brooks K., Chillingworth T., Clark K., Doggett J.,
Frager A., Hance Z., Hauser H., Jagels K., Moule S., Norbertczak H.,
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Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
Enterobacteriaceae; Pectobacterium.
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Bacteria; Actinobacteria; Actinobacterias; Actinomycetales; Streptosporangineae; Nocardiopsaceae; Thermobilida.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 55.6%; Score 5; DB 2; Length 124; Best Local Similarity 100.0%; Pred. No. 3.9e+02; Matches 5; Conservative 0; Mismatches 0; Indels
                                                               Length 122;
                                                                                           0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; CP000088; AAZ54707.1; -; Genomic DNA.
Complete proteome; Hypothetical protein.
SEQUENCE 124 AA; 14456 MW; 5F749F9A86A83FC0 CRC64;
 EMBL, CR553306; CA107454.1; -; Genomic DNA.
Complete proteome; Hypochetical protein.
SEQUENCE 122 AA; 13581 MW; 18B790A94ECD3255 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          05-JUL-2005, integrated into UniProtKB/Swiss-Prot. 16-AUG-2004, sequence version 1. 7-MAR-2006, entry version 15. Protein crcB homolog. Name=crcB; OrderedLocusNames=ECA1295;
                                                             55.6%; Score 5; DB 2; Ler 100.0%; Pred. No. 3.9e+02; Live 0; Mismatches 0;

    NUCLEOTIDE SEQUENCE (LARGE SCALE GENOMIC DNA).

                                                                                                                                                                                                                                            13-SEP-2005, integrated into UniProtKB/TrEMBL
                                                                                                                                                                                                                  124 AA.
                                                                                                                                                                                                               Q47860 THEFY PRELIMINARY; PRT; Q47860;
                                                                                                                                                                                                                                                    13-SEP-2005, sequence version 1. 07-FEB-2006, entry version 4. Hypothetical protein. OrderedLocusNames=Tfu_0669;
                                                                                            5; Conservative
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                                                                  Query Match
Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=269800;
                                                                                                                                               16 FLRHP 20
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Distributed under the Creative Commons Attribution-NoDerivs License
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                                                                                                                                                       Proc. Natl. Acad. Sci. U.S.A. 101:11105-11110(2004).
      Walker D., Whitehead
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Eureleostomi,
Amphibia, Batrachia, Anura, Mesobatrachia, Pipoidea, Pipidae;
                                                                                           carotovora subsp. atroseptica and characterization of virulence
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Ormond D., Price C., Quail M.A., Sanders M., Walker D., Whitel
Salmond G.P.C., Birch P.R.J., Parkhill J., Toth I.K.;
"Genome sequence of the enterobacterial phytopathogen Erwinia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Complete protecome; Inner membrane; Membrane; Transmembrane. CHAIN 1 127 Protein crcB homolog.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        55.6%; Score 5; DB 1; Length 127; 100.0%; Pred. No. 4e+02; ive 0; Mismatches 0; Indels
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Submitted (APR-2000) to the EMBL/GenBank/DDBJ databases.
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SEQUENCE 128 AA; 14140 MW; B79556DEF1C0880B CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Protein crcB homolog /FTId=PRO_0000110100
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GO; GO:0003723; F:RNA binding; IEA.
GO; GO:0008270; F:zinc lon binding; IEA.
GO:0006445; P:regulation of translation; IEA.
InterPro; IPR008705; Nanos_RNA_bd.
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01-DEC-2001, sequence version 1.
07-FEB-2006, entry version 12.
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GenomeReviews; BX950851_GR; ECA1295.
                                                                                                                                                                                                                     membrane protein (By similarity).
!- SIMILARITY: Belongs to the crcB family.
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InterPro; JPR003691; Camphor_CrcB.
Pfam; PF02537; CRCB; 1.
TIGRPAMs; TIGR00494; crcB; 1.
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35 55 Pot
71 191 Pot
103 123 Pot
127 AA; 13391 MW; A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRAIN=L420-91T;
PubMed=15044388; DOI=10.1093/glycob/cwh064;
Schaffer C., Messner P.;
Schaffere-layer glycoproteins: an example for the diversity of bacterial glycosylation with promising impacts on nanobiotechnology.";
Glycobiology 14:31R-42R(2004).
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PubMed=15316277;
Novotny R., Pfoestl A., Messner P., Schaffer C.;
"Genetic organization of chromosomal S-layer glycan biosynthesis loci
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Jaillon O., Aury J.-M., Brunet F., Petit J.-L., Stange-Thomann N., Mauceli E., Bouneau L., Fischer C., Ozouf-Costaz C., Bernot A., Nicaud S., Jaffe D., Fisher S., Lutfalla G., Dossat C., Segurens B. Dasilva C., Salanoubat M., Levy M., Boudet N., Castellano S.,
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Actinopterygii; Neopterygii; Teleostei; Buteleostei; Neoteleostei;
Acanthomorpha; Acanthopterygii; Percomorpha; Tetracdontiformes;
Tetradontoidea; Tetracdontidae; Tetracdon.
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GO; GO:0016787; F:hydrolase activity; IEA.
GO; GO:0004518; F:nuclease activity; IEA.
Interpro; IFR012337; RNaseH_fold.
Hydrolase; Nuclease.
SEQUENCE 132 AA; 15708 MW; 603062293C9D57B0 CRC64;
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19-JUL-2005, sequence version 1.
07-FEB-2006, entry version 4.
Chromosome 12 SCAF14996, whole genome shotgun sequence.
ORFNames=GSTENG00029043001;
                                                                                                                                                                                                                                                                                                                                                         Putative transposase.
Aneurinibacillus thermoaerophilus.
Bacteria: Firmicutes; Bacillales; Paenibacillaceae;
Aneurinibacillus group; Aneurinibacillus.
                                                                                                                                                                                                                                        05-JUL-2004, integrated into UniProtXB/TrEMBL 05-JUL-2004, sequence version 1. 21-FEB-2006, entry version 16.
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117 FLRHP 121
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|TWFLR 29
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Anthouard V., Jubin C., Castelli V., Katinka M., Vacherie B., Biemont C., Skalli Z., Cattolico L., Poulain J., De Berardinis V., Cruaud C., Duprat S., Brottier G., Couron J., Rollis M., Lardier G., Chapple C., McKernan K.J., McEwan P., Bosak S., Kellis M., Volff J.-N., Guigo R., Zody M.C., Mesirov J., Lindblad-Toh K., Birren B., Nusbaum C., Kahn D., Robinson-Rechavi M., Laudet V., Schachter V., Quetier F., Saurin W., Scarpelli C., Wincker P., Lander E.S., Weissenbach J., Roest Crollius H.; "Genome duplication in the teleost fish Tetraodon nigroviridis reveals the early vertebrate proto-karyotype.";
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                                                                                                                                                                                                                                                                                                NUCLEOTIDE SEQUENCE.
Genoscope; Whitehead Institute Centre for Genome Research;
Submitted (FEB-2004) to the EMBL/GenBank/DDBJ databases.
-!- CAUTION: The sequence shown here is derived from an EMBL/GenBank/DDBJ whole genome shotgun (WGS) entry which is preliminary data.
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Kineococcus radiotolerans SRS30216.
Bacteria; Actinobacteria; Actinobacteridae; Actinomycetales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRAIN-SRS30216,
US DOB Joint Genome Institute (JGI-PGF),
Copeland A., Lucas S., Lapidus A., Barry K., Detter C., Glav-
Hammon N., Isranl S., Pitluck S., Richardson P.;
"Sequencing of the draft genome and assembly of Kine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  55.6%; Score 5; DB 2; Length 132; 100.0%; Pred. No. 4.1e+02; ive 0; Mismatches 0; Indels
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PRINTS; PR0661; ERNFAMILY.
PROSITE; PS50057; FEMF 31.
SEQUENCE 132 AA; 15482 MW; 523EE6E225D67CFC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GO; GO:0005737; C:cytoplasm; IEA.
GO; GO:0005856; C:cytoplasm; IEA.
GO; GO:0016020; C:membrane; IEA.
GO; GO:0008092; F:cytoskeletal protein binding; IEA.
InterPro; IPR000299; Band 4.1.
InterPro; IPR000798; EZ/rad/moesin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; CAAE01014996; CAG08149.1; -; Genomic_DNA
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27-SEP-2005, integrated into UniProtKB/TrEMBL.
27-SEP-2005, sequence version 1.
07-FEB-2006, entry version 3.
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Matches 5; Conserv
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NCBI_TaxID=290402;
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                                                                                                                                                                                                                                                            Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms Distributed under the Creative Commons Attribution-NoDerivs License
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=21633832; PubMed=11772643; DOI=10.1128/AEM.68.1.335-345.2002; Beja O., Koonin E.V., Aravind L., Taylor L.T., Seitz H., Stein J.L., Bensen D.C., Feldman R.A., Swanson R.V., DeLong E.F.; "Comparative Genomic Analysis of Archaeal Genotypic Variants in a Single Population and in Two Different Oceanic Provinces."; Appl. Environ. Microbiol. 68:335-345(2002).
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                                                                                  US DOE Joint Genome Institute (JGI-PGF);
Copeland A., Lucas S., Lapidus A., Barry K., Detter C., Glavina T.,
Hammon N., Israni S., Pitluck S., Richardson P.;
Submitted (JUN-2005) to the EMBL/GenBank/DDBJ databases.
-!- CAUTION: The sequence shown here is derived from an
EMBL/GenBank/DDBJ whole genome shotgun (WGS) entry which is
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Submitted (JUN-2005) to the EMBL/GenBank/DDBJ databases.
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SEQUENCE 136 AA; 15922 MW; 852D6DD1B1626B5C CRC64;
                                                                                                                                                                                                                                                                                                                                                   Hypothetical protein.
SEQUENCE 134 AA; 15058 MW; F037BBE97A0D4676 CRC64;
                                                                                                                                                                                                                                                                                                                          EMBL; AAEF02000024; EAM74977.1; -; Genomic_DNA.
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uncultured crenarchaeote 74A4.
Archaea, Crenarchaeota; environmental samples;
marine archaeal group 1.
NCBI_TaxID=166279;
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01.JUN-2003, sequence version 1.
07-FEB-2006, entry version 13.
07-FEB-2006, entry version 13.
OrderedLocusNames=SAV3400;
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01-DEC-2001, sequence version 1.
07-FEB-2006, entry version 9.
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QB2HVB;
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Q977K8;
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61 TWFLR 65
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Q82HV8 STR
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Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms Distributed under the Creative Commons Attribution-NoDerivs License
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STRAIN=MA-4680 / ATCC 31267 / NCIMB 12804 / NREL 8165;
MEDLINE=22608306; PubMed=12692552; DOI=10.1038/nbt820;
Ikeda H., Ishikawa J., Hanamoto A., Shinose M., Kikuchi H., Shiba T., Sakaki Y., Hattori M., Omura S.;
"Complete genome sequence and comparative analysis of the industrial microorganism Ereptomyces avermitiiis.";
Nat. Biotechnol. 21:526-531(2003).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
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                                                                                                                                       NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].
STRAIN=MA-4680 / ATCC 31267 / NCIMB 12804 / NRL 8165;
MEDLINE=21477403; PubMed=11572948; DOI=10.1073/pnas.211433198;
Omura S., Ikeda H., Ishikawa J., Hanamoto A., Takahashi C.,
Shinose M., Takahashi Y., Horikawa H., Nakazawa H., Osonoe T.,
Kikuchi H., Shiba T., Sakaki Y., Hattori M.;
"Genome sequence of an industrial microorganism Streptomyces avermitilis: deducing the ability of producing secondary
Bacteria, Actinobacteria, Actinobacteridae, Actinomycetales, Streptomycineae; Streptomycetaceae, Streptomyces, NCBI_TaxID=33903;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Copeland A., Lucas S., Lapidus A., Barry K., Detter J.C., Gl Hammon N., Israni S., Pitluck S., Richardson P.; Septencing of the draft genome and assembly of Clostridium beijerincki NCIMB 8052."; Submitted (OCT-2005) to the EMBL/GenBank/DDBJ databases.
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Submitted (NOV-2005) to the EMBL/GenBank/DDBJ databases.
-!- CAUTION: The sequence shown here is derived from an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Complete proteome; Hypothetical protein.
SEQUENCE 136 Aa; 14797 MW; BAIEIAlD59C1F6F3 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Proc. Natl. Acad. Sci. U.S.A. 98:12215-12220(2001)
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US DOE Joint Genome Institute (JGI-PGF);
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Q2WJ35;
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                                                                                     Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms Distributed under the Creative Commons Attribution-NoDerivs License
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "An integrated gene annotation and transcriptional profiling approach
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PubMed=14709175; DOI=10.1186/gb-2003-5-1-r3;
Hild M., Beckmann B., Haas S.A., Koch B., Solovyev V., Busold C.
Fellenberg K., Boutros M., Vingron M., Sauer F., Hoheisel J.D.,
EMBL/GenBank/DDBJ whole genome shotgun (WGS) entry which is
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Drosophila melanogaster (Fruit fly).
Bukaryota, Metazoa, Arthropoda, Hexapoda, Insecta, Pterygota, Neoptera, Endopterygota, Diptera, Brachycera, Muscomorpha, Ebhydroidea, Drosophilidae, Drosophila.
NCBI_TaxID=7227;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             towards the full gene content of the Drosophila genome.",
Genome Biol. 5:RESEARCH0003.1-RESEARCH0003.17(2003).
-!- MISCELLANEOUS: The sequence shown here is derived from an
EMBL/GenBank/DDBJ third party annotation (TPA) entry.
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Bacteria, Actinobacteria; Actinobacteridae, Actinomycetales, Micrococcineae, Micrococcaceae, Arthrobacter.
[1]
                                                                                                                                                                                                                                                                 55.6%; Score 5; DB 2; Length 138; 100.0%; Pred. No. 4.3e+02; ive · 0; Mismatches 0; Indels
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                                                                                                                                                                        EMBL; AALO01000040; EAPS8092.1; -; Genomic DNA.
SEQUENCE 138 AA; 16559 MW; 70DB16611E5307AC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; BK003633; DAA02331.1; -; Genomic DNA.
SEQUENCE 139 AA; 14909 MW; DBA4F99D68E4045D CRC64;
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Similar to Glutaredoxin and related proteins.
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                                    preliminary data.
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RETWF 47
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Bukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta,
Spermatophyta, Magnoliophyta, Liliopsida, Poales, Poaceae, BEP clade,
Ehrhartoideae, Oryzeae, Oryza.
                                                                                                                                                                                                                                                                                                                                  Larimer F., Land M.;
Larimer F., Land M.;
"Annotation of the draft genome assembly of Arthrobacter sp. FB24.";
Submitted (JUN-2005) to the EMBL/GenBank/DDBJ databases.
-!- CAUTION: The sequence shown here is derived from an
EMBL/GenBank/DDBJ whole genome shotgun (WGS) entry which is
STRAIN=FB24;
US DOE Joint Genome Institute (JGI-PGF);
Copeland A., Lucas S., Lapidus A., Barry K., Detter C., Glavina T.,
Hammon N., Israni S., Pitluck S., Richardson P.;
"Sequencing of the draft genome assembly of Arthrobacter sp. FB24.";
Submitted (JUN-2005) to the EMBL/GenBank/DDBJ databases.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Submitted (JUL-2002) to the EMBL/GenBank/DDBJ databases.
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TIGRAPAS; TIGRO2200; GLY actino; 1.
PROSITE; PSO10194; THIOREBOXIN; UNKNOWN 1.
SEQUENCE 1139 AA; 14842 MW; 188B6C4668BBD6E6 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GO, GO:0005489; F:electron transporter activity; IEA. GO; GO:0006118; P:electron transport; IEA. InterPro; IPR011915; GIX actino. InterPro; IPR012336; Thiordxn-like_fd. InterPro; IPR006662; Thiored. InterPro; IPR006662; Thiored. InterPro; IPR006663; Thiored.
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                                                                                                                                                                                                                                                                   STRAIN=FB24;
US DOE Joint Genome Institute (PGF-ORNL);
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bacteria; Actinobacteria, Actinobacteridae; Actinomycetales; Streptomycineae; Streptomyces.
NCBI_TaxID=1935;
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                                                                                                                                                                                                                                                                                                               55.6%; Score 5; DB 2; Length 145; 100.0%; Pred. No. 4.4e+02; ive 0; Mismatches 0; Indels
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Spatz K., Scholz C.J., Redenbach M.;
Submitted (DEC-2002) to the EMBL/GenBank/DDBJ databases.
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Hypothetical protein; Plasmid.
SEQUENCE 157 AA; 17330 WW; AF4439D581270D24 CRC64;
                                                                                                                                                                                                                                               145 AA; 15297 MW; 3FE9DC259C5A3986 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-JUN-2003, integrated into UniProtKB/TrEMBL.
01-JUN-2003, sequence version 1.
07-FEB-2006, entry version 8.
Hypothetical protein pSV2.34c.
GO; GO:0005525; F:GTP binding; IEA.
InterPro; IPR006074; GTP1/OBG dom.
InterPro; IPR006073; GTP1_OBG;
InterPro; IPR006169; GTP1_OBG sub.
InterPro; IPR002917; MMR_HSR1_GTP_bd.
Pfam; PF01018; GTP1_OBG; 1.
Pfam; PF01026; MMR_HSR1; 1.
PRINTS; PR00326; GTP1OBG.
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STRAIN=SANK95570;
MEDLINE=22123362; PubMed=12127493;
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Q849K6;
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Query Match
Best Local Similarity 100.vv
Best Local Similarity 5; Conservative
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Q2PS61 9BA
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Ueda K., Yamashita A., Ishikawa J., Shimada M., Watsuji T.,
Worimura K., Ikeda H., Hattori M., Beppu T.;
"Genome sequence of Symbiobacterium thermophilum, an uncultivable
bacterium that depends on microbial commensalism.";
Nucleic Acids Res. 32:4937-4944(2004).
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                                                   55.6%; Score 5; DB 2; Length 140; 100.0%; Pred. No. 4.3e+02; tive 0; Mismatches 0; Indels
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Bacteria; Firmicutes; Lactobacillales; Streptococcaceae;
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Submitted (JUL-1995) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; AP006840; BAD41190.1; -; Genomic DNA.
Complete proteome; Hypothetical protein.
SEQUENCE 141 AA; 14829 MW; 44291F184358FB93 CRC64;
       140 AA; 16304 MW; 2476A657C1C2FC74 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].
STRAIN=T / IAM 14863;
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                                                                                                                                                                                                                                                                                                                                                              11-OCT-2004, integrated into UniProtKB/TrEMBL
11-OCT-2004, sequence version 1.
07-FEB-2006, entry version 10.
Hypochetical protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    OrderedLocusNames=STH2205; ORFNames=STH2205; Symbiobacterium thermophilum.
Bacteria; Actinobacteria; Symbiobacterium.
NCBI TaxID=2734;
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HSSP; P20964; LLNZ.
SMR; Q9RIK1; 5-143.
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QGTMA3;
                                                                       Local Similarity 100.
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Matches 5, Conservative
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NUCLEOTIDE SEQUENCE.
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                                                                                                                                                                                              84 FLRHP 88
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       SEQUENCE
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Submitted (NOV-2005) to the EMBL/GenBank/DDBJ databases.
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Throback I.N., Pell M., Johansson M., Hallin S.;
"Denitrifying communities in soil are affected strongly by the heavy
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Submitted (NOV-2005) to the EMBL/GenBank/DDBJ databases
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158 AA; 17283 MW; 261AF19CECECB513 CRC64;
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The invention describes a recombinant DNA construct comprising a polynucleotide consisting of a sequence encoding an amino acid sequence available in electronic form from the US patent office at the invention are also useful in physical arrays of molecules and as of the invention are also useful in physical arrays of molecules and as column the interesting markers. The recombinant DNA construct is useful for improving plant tolerance to cold, heat, drought, herbicides, extreme cancing conditions, pathogens or pests, for manipulating growth rate in plant cells by modification of the cell cycle pathway, for conferring increased resistance to plant disease, for producing galactomannan, increased resistance to plant disease, for producing galactomannan, increased resistance to plant disease, for producing galactomannan, cecombination in plants, for increasing the rate of homologous recombination in plants, for improving yield by modification of photosynthesis or carbohydrate, nitrogen or phosphorus use and/or uptake or by providing improved plant growth and development under at least one stress condition or for modifying seed oil or protein yield and/or content. This is the amino acid sequence of a plant full length insert in content. This is the amino acid sequence of a plant full length insert in content.
                                                                                                                                                                                                                                                                                                                                                                                                                                     New recombinant DNA construct, useful for improving plant tolerance to cold, heat, drought, herbicides, extreme osmotic conditions, pathogens pests, for conferring increased resistance to plant disease, or for improving yield.
growth rate; cell cycle pathway; disease resistance; galactomannan production; lighin production; plant growth regulator; yield; plant growth; plant development; seed oil; protein yield; protein content.
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ive 0; Mismatches
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ADX78611
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ADF06155
AAW98827
ADT60944
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ADS07806
AAB19419
AAG21033
AAGS0070
ABB81711
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AAB61631
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ADJ26726
ADN20151
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AAG53574
                       AAR92511
AAR94720
AAW25975
                                                                     AAW25967
AAW25955
AAW25951
AAW25959
                                                                                                                                                                                  AAY58671
ADX66915
AEC04333
                                                                                                                                                                                                                                                   AAR74639
AAR88703
                                                                                                                                                                                                                                                                                 AAR94723
AAU07134
AAU76136
ABG96499
ABG96505
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AAG50071
AAG21034
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADX89331 standard; protein; 234 AA
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         ADX89331;
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or

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Gaps

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RESULT 1 4DX8933

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Plant full length insert polypeptide seqid 57443.

21-APR-2005 (first entry)

ADX94779;

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New recombinant DNA construct, useful for improving plant tolerance to cold, heat, drought, herbicides, extreme osmotic conditions, pathogens or pests, for conferring increased resistance to plant disease, or for
     plant protectant; plant growth regulant; gene therapy; plant; recombinant DNA construct; physical array; plant breeding marker; cold tolerance; herbicide tolerance; extreme osmotic condition; pathogen tolerance; pest tolerance; growth rate; cell cycle pathway; disease resistance; galactoromannan production; lignin production; plant growth regulator; yield; plant growth; plant development; seed oil; protein yield; protein content.
                                                                                                                                                                                                                                                                                          Tabaska JE,
                                                                                                                                                                                                                                                                                          Screen SE,
                                                                                                                                                                                                                                                                                                                                                                                  Claim 1; SEQ ID NO 57688; 15pp; English.
                                                                                                                                                                                                                                                                                         Kovalic DK,
                                                                                                                                                                28-APR-2003; 2003US-00425114,
                                                                                                                                                                                            05-NOV-2001; 2001US-00985678
                                                                                                                                                                                                                 LIU J.
ZHOU Y.
KOVALIC D K.
SCREEN S E.
                                                                                                                                                                                                                                                                                                            WPI; 2004-180133/17.
                                                                                                                                                                                                                                                           TABASKA J E.
                                                                                                                                                                                                                                                                                         Zhou Y,
                                                                                                                       US2004034888-A1
                                                                                                                                                                                                                                                                                                                                                               improving yield.
                                                                                                    Jnidentified
                                                                                                                                                                                    06-MAY-1999;
                                                                                                                                            19-FEB-2004.
                                                                                                                                                                                                                  (LIUJ/)
                                                                                                                                                                                                                                      (KOVA/)
(SCRE/)
                                                                                                                                                                                                                                                           (TABA/)
(CAOY/)
                                                                                                                                                                                                                                                                                         Liu J,
                                                                                                                                                                                                                              (ZHOU/)
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The invention describes a recombinant DNA construct comprising a polynucleotide consisting of a sequence encoding an amino acid sequence available in nelectronic form from the US patent office at available in electronic form from the US patent office at the sequence. Lend?Doc10120040388. The polynucleotide of the invention are also useful in physical arrays of molecules and as plant breeding markers. The recombinant DNA construct is useful for improving plant tolerance to cold, heat, drought, herbicides, extreme osmotic conditions, pathogens or pests, for manipulating growth rate in plant cells by modification of the cell cycle pathway, for conferring increased resistance to plant disease, for increasing the rate of homologous recombination in plants, for improving yield by modification of photosynthesis or carbohydrate, nitrogen or phosphorus use and/or uptake or treas condition or for modifying seed oil or protein yield and/or content. This is the amino acid sequence of a plant full length insert in the propertie that can be used in the recombinant DNA construct of the invention.

Sequence 314 AA;

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Gaps
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66.7%; Score 6; DB 8; Length 314;
100.0%; Pred. No. 57;
ive 0; Mismatches 0; Indels
            Local Similarity 100
Query Match
                          Matches
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ADX94779 standard; protein; 316 AA. ADX94779 ID ADX9 RESULT 3

SWFLRN 157 œ

152

3 SWFLRN

8

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The invention describes a recombinant DNA construct comprising a polynucleotide consisting of a sequence encoding an amino acid sequence available in electronic form from the US patent office at the invention are also useful in physical arrays of molecules and as plant breeding markers. The recombinant DNA construct is useful for improving plant tolerance to cold, heat, drought, herbicides, extreme smoothing pathogens or pests, for manipulating growth rate in plant cells by modification of the cell cycle pathway, for conferring increased resistance to plant disease, for increasing the rate of homologous recombination in plants, for improving yaled by modification of photosynthesis or carbohydrate, nitrogen or phosphorus use and/or uptake or by providing improved plant growth and development under at least one stress condition or for modifying seed oil or protein yield and/or content. This is the amino acid sequence of a plant full length insert polypeptide that can be used in the recombinant DNA construct of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New recombinant DNA construct, useful for improving plant tolerance to cold, heat, drought, herbicides, extreme osmotic conditions, pathogens or pests, for conferring increased resistance to plant disease, or for
                                                                                                          recombinant DNA construct; physical array; plant breeding marker; cold tolofrance, heat tolerance; drought tolerance; heat tolerance; extreme osmotic condition; pathogen tolerance; pest tolerance; growth rate; cell cycle pathway; disease resistance; galactomannan production; lignin production; plant growth regulator; yield; plant growth; plant development; seed oil; protein yield; protein content.
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                                                                                              protectant; plant growth regulant; gene therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Screen SE, Tabaska JE,
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100.0%; Pred. No. 57;
ive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 1; SEQ ID NO 57443; 15pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Zhou Y, Kovalic DK,
                                                                                                                                                                                                                                                                                                                                          28-APR-2003; 2003US-00425114.
                                                                                                                                                                                                                                                                                                                                                                            06-MAY-1999; 99US-00304517.
05-NOV-2001; 2001US-00985678.
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ZHOU Y.
KOVALIC D K.
SCREEN S E.
TABASKA J E.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         improving yield.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 316 AA;
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                                                                                                                                                                                                                                              Unidentified.
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(ZHOU/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CAOY/)
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Matches
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Propionibacterium acnes predicted ORF-encoded polypeptide #22481.

(first entry)

20-OCT-2003

ABM57805;

ABM57805 standard; protein; 392 AA.

RESULT 5 ABM57805 Acne vulgaris; antiseborrhoeic; dermatological; antibacterial;

immunostimulant; immune response; vaccine

Propionibacterium acnes.

WO2003033515-A1.

24-APR-2003

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Sequences AAU39105-AAU68017 represent Propionibacterium acnes immunogenic polypeptides. The proteins and their associated DNA sequences are used in the treatment, prevention and diagnosis of medical conditions caused by P. acnes. The disorders include SAPHO syndrome (synovitis, acne, pustulosis, hypertosis and osteomyelitis), uveitis and endophthalmitis. P. acnes is also involved in infections of bone, joints and the central nervous system, however it is particularly involved in the inflammatory lesions associated with acne vulgaris. A method for detecting the presence or absence of P. acnes in a patient comprises contacting a sample with a binding agent that binds to the proteins of the invention and determining the amount of bound protein in the sample. The polypeptides may be used as antigens in the production of antibodies peptific for P. acnes proteins. These antibodies can be used to downregulate expression and activity of P. acnes polypeptides and therefore treat P. acnes infections. The antibodies may also be used as diagnostic agents for determining P. acnes presence, for example, by enzyme linked immunosorbent assay (ELISA). Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at
                                                                                                                                                                                    SAPHO syndrome, synovitis, acne; pustulosis; hypertosis; osteomyelitis; uvaitis; endopthealmitis; bone; joint; central nervous system; ELISA; inflammatory lesion; acne vulgaris; enzyme linked immunosorbent assay; dermatological; osteopathic; neuroprotectant.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Propionibacterium acnes polypeptides and nucleic acids useful for vaccinating against and diagnosing infections, especially useful for treating acne vulgaris.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bhatia A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             66.7%; Score 6; DB 4; Length 392;
100.0%; Pred. No. 69;
iive 0; Mismatches 0; Indels
                                                                                                                                               Propionibacterium acnes immunogenic protein #22182.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Skeiky YAW, Persing DH, Mitcham JL, Wang SS,
L'maisonneuve J, Zhang Y, Jen S, Carter D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Example 1; SEQ ID NO 22481; 1069pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ftp.wipo.int/pub/published_pct_sequences
                   AAU61286 standard; protein; 392 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                               21-APR-2000; 2000US-0199047P.
02-JUN-2000; 2000US-0208841P.
07-JUL-2000; 2000US-0216747P.
                                                                                                                                                                                                                                                                                                                                                                                                                       20-APR-2001; 2001WO-US012865.
                                                                                                     27-FEB-2002 (first entry)
                                                                                                                                                                                                                                                                                                Propionibacterium acnes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (CORI-) CORIXA CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2001-616774/71.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N-PSDB; AAS59616.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 392 AA;
                                                                                                                                                                                                                                                                                                                                      WO200181581-A2.
                                                                                                                                                                                                                                                                                                                                                                               01-NOV-2001.
                                                             AAU61286;
AAU61286
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New Propionibacterium acnes polypeptides and polynucleotides encoding the polypeptide, useful for diagnosing, preventing or treating acne vulgaris, or for stimulating an immune response specific for a P. acnes protein.

Example 1; SEQ ID NO 22481; 1481pp; English

Maisonneuve JL; Jones R, Carter D;

Persing DH, Bhatia A, Lodes MJ, Benson DR,

Zhang Y, Wang S, Jen S, Lod Barth B, Vallieve-Douglass J;

WPI; 2003-381789/36. N-PSDB; ACF64545.

, Skeiky YAW, Wang S, Jen S,

Mitcham JL,

(CORI-) CORIXA CORP.

11-OCT-2002; 2002WO-US032727. 15-OCT-2001; 2001US-00978825

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The invention relates to an isolated polynucleotide (ACF64435-ACF64733)

cncoding a Propionibacterium acnes protein. The invention also relates to encoded by the polynucleotides (ABM35624-ABM64536) and to immunogenic fragments of P. acnes polypeptides. The invention additionally encompasses expression vectors and host cells comprising a additionally encompasses expression vectors and host cells comprising a polymetric cells comprising a polymetric of the invention; fusion proteins comprising a polypeptide of the invention; and an isolated T cell population comprising P. acnes polypeptides, or this method; a vaccine composition (comprising P. acnes polypeptides, via this method; a vaccine composition (comprising P. acnes polypeptides, polymucleotides, antibodies, fusion proteins, T cell populations, or can ignor presenting cells that express the polypeptide); a method and kit for detecting or determining the presence or absence of P. acnes in a configuration or antigen-presenting cells that express the polymetric or an include propulations or antigen-presenting cells that express the polymetric or an include propulation or antigen-presenting cells that express the polymetric or an include propulation or antigen-presenting cells that express the polymetric or a protein. The polymucleotides can also be used as probes or primers for nucleic acid hybridisation. The vaccine composition is useful for the primers for the kit is useful for performing a diagnostic assay. The present or eading frame) contained within the P. acnes polymetric does not contained within the P. acnes polymetric or the reacting contained within the P. acnes polymetric or the primers for reading frame) contained within the P. acnes polymetric desay. The present or and the kit is useful for performing a diagnostic assay. The present creating rrane) contained within the P. acnes polymetric does not for tracating accidence invention. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 392;
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1... 0; Mismatches
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100.0%; Pred. No.
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Matches 6; Conservative
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Gaps

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The invention relates a recombinant DNA construct comprising a polypuclectide having any of 5544 mucleotide sequences (CDNAs SEQ ID NO: 1-5544) and encoding a polypeptide with any of 5544 amino acid sequences (SEQ ID NO: 5545-11088). The CDNAs and proteins are from corn, sovbean, Arabidopsis, wheat and rape but the specification does not indicate which sequences is derived from which organism. Also included is a method of producing a plant having an improved property, comprising transforming a plant with a recombinant DNA construct comprising a promoter region functional in a plant cell operably joined to a polypucleotide encoding a polypeptide associated with the property, and growing the transformed plant. The property is selected from improving plant cold tolerance, for manipulating growth rate in plant cells by modification of the cell cycle pathway, for improving plant drought tolerance, for production, for production cesistance to plant disease, for galactomannan production, for production improving plant tolerance to herbicides, for increasing the rate of comprising the rate of colorance to plant tolerance to herbicides, for increasing the rate of colorance to plant tolerance to herbicides, for increasing the rate of colorance to plant tolerance to herbicides, for increasing the rate of colorance to plant tolerance to monologous recombination in plants, for ingroving plant tolerance to extreme computions, for improving plant tolerance conditions, for improving plant tolerance conditions, for improving plant tolerance conditions, for improving plant tolerance conditions, for improving plant tolerance conditions, for improving plant tolerance conditions, for improving plant tolerance conditions, for improving plant tolerance conditions, for improving plant conditions, for improving plant tolerance conditions, for improving plant conditions, for improving plant conditions, for improving plant conditions, for improving plant conditions, for improving plant conditions, for improving plant conditions, for impr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New recombinant DNA constructs useful in the field of biochemistry and genetics, and in particular for producing transgenic plants with improved biological characteristics.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tolerance to pathogens or pests, for yield improvement by modification of photosynthesis, for modifying seed oil yield and/or content, for modifying seed oil yield and/or content, for modification of carbohyare, nitrogen or phosphorus use and/or uptake and for yield improvement by providing improved plant growth and development under at least one stress condition. The polymicleotide may also encode a plant transcription factor. The methods and compositions of the present invention are useful in the field of biochemistry and
                                                                                                                                                                                                                                                                                             Plant; transgenic; cold tolerance; growth rate; drought tolerance; disease resistance; galactomannan production; plant growth regulator; heat tolerance; herbicide tolerance; lignin production; extreme osmotic condition tolerance; pathogens resistance; pest resistance; pest resistance; yield improvement; seed oil yield; seed protein yield.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 2; SEQ ID NO 8197; 14pp; English.
                                                           ADT58120 standard; protein; 484 AA
                                                                                                                                                                                                                                          Plant polypeptide, SEQ ID 8197.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28-APR-2003; 2003US-00424599.
28-APR-2003; 2003US-00425115.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18-DEC-2003; 2003US-00739930
                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (KOVA/) KOVALIC D K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2004-757369/74.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US2004216190-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Viridiplantae.
                                                                                                                                                                               13-JAN-2005
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RESULT 6
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ID ADT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New stress-responsive nucleic acid, useful for altering the responsiveness of a plant, e.g. cereal, to an abiotic stress such as cold stress, salt stress or osmotic stress.
               tolerance to plant peets or pathogens. They can also be used in physical arrays of molecules, plant breeding markers, computer-based storage and analysis systems. The present sequence is one of the 5544 plant protein sequences of the invention. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in sequence commat directly from USPTO at seqdata.uspto.gov/sequence.html?DocID=20040216190.
extreme osmotic and drought conditions, and improving plant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          abiotic stress tolerance; transgenic plant; plant; cereal; agriculture.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Goff SA, Katagiri F;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rice abiotic stress responsive polypeptide SEQ ID NO:6672.
                                                                                                                                                                                                            Length 484;
                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cooper B, Glazebrook J,
N, Ricke D, Zhu T;
                                                                                                                                                                                                          66.7%; Score 6; DB 8;
100.0%; Pred. No. 83;
ive 0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                      ABM88426 standard; protein; 494 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                22-JUN-2001; 2001US-0300112P.
24-AUG-2001; 2001US-0314662P.
26-SEP-2001; 2001US-0325277P.
21-NOV-2001; 2001US-0332132P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21-JUN-2002; 2002WO-US019668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               02-JUN-2005 (first entry)
                                                                                                                                                                                                                                                   6; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Briggs SP,
T, Provart
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2003-248011/24.
                                                                                                                                                                                                                                                                                                                        287 SWFLRN 292
                                                                                                                                                                                                                             Local Similarity
                                                                                                                                                                                                                                                                                     œ
                                                                                                                                                                        Sequence 484 AA;
                                                                                                                                                                                                                                                                                   3 SWFLRN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO2003008540-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Oryza sativa.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-JAN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Moughamer
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABM88426;
                                                                                                                                                                                                            Query Match
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Matches
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AAR47230
                                                            RESULT 9
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              human G protein linked thrombin receptor sequence. The peptides, which human G protein linked thrombin receptor sequence. The peptides, which may be cyclic, have the formula X1-P81-X2-X3-Omega-X4 in which Psi = any con-) natural aromatic amino acid (aa); Omega = any (non-) natural basic a or derivatives; X1 is absent or is a natural aa, 1-3C acyl or 1-5C alkyl; X2 = any natural aa, The peptides are are antagonists and a spent or is any natural aa, The peptides are are antagonists and agonists for treating disorders involving thrombin receptors, e.g. cardiovascular, inflammatory or gastrointestinal diseases; osteoporosis; tissue injury and repair (including nerve regeneration); and cancer (by inhibiting angiogenesis and metastasis). They may also be used inhibiting angiogenesis and metastasis). They may also be used particularly used to modulate platelet function (acting synergistically cut aspirin-type compounds) and so are useful in cases of myocardial formation, as well as to coat prostheses and to reduce arterial plaque
                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ew cyclic peptide(s) derived from the protein G linked thrombin receptor are agonists or antagonists for treating diseases involving this
                                                                                                                                                                                                                                                           Peptide analogue, N-terminal domain, cancer, angiogenesis, metastasis, human G protein linked thrombin receptor; cyclic; antagonist, agonist, cardiovascular disease, inflammatory disease; gastrointestinal disease, osteoporosis; tissue injury, tissue repair, nerve regeneration, thrombin-mimetic study; platelet function; myocardial infarction;
                                                Gaps
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0
                       Length 494;
                                               0; Indels
                       DB 7;
                     66.7%; Score 6; DB 7
100.0%; Pred. No. 85;
tive 0; Mismatches
                                                                                                                                                                                                                                     Linear thrombin receptor peptide analogue.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hollenberg MD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      receptor, e.g. myocardial infarction.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (UYTE-) UNIV TECHNOLOGIES INT INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Example 1; Col 49; 36pp; English.
                                                                                                                                                            AAY16490 standard; peptide; 7 AA
                                                                                                                                                                                                                                                                                                                                                                                                                       95US-00405933
                                                                                                                                                                                                                                                                                                                                                                                                                                               93US-00080643
                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                         arterial plaque formation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Moore GJ, Matsoukas JM,
                                               6; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 1996-251084/25.
                                                                                         SWFLRN 308
                                  Local Similarity
                                                                       3 SWFLRN 8
 Sequence 494 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                       17-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                               21-JUN-1993;
                                                                                                                                                                                                           06-AUG-1999
                                                                                                                                                                                                                                                                                                                                                                        US5516889-A.
                                                                                                                                                                                                                                                                                                                                                                                                14-MAY-1996.
                                                                                                                                                                                                                                                                                                                                                 Synthetic.
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                                                                                                                                                                                   AAY16490;
                        Query Match
                                                Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Altering the degree of internalization of a Clostridial toxin into a cell comprises altering an activity of a lipid raft on a membrane of a cell for preparing a composition for treating e.g., obesity.
                                                                                                                                                                                                                                                   anorectic; antidiabetic; antiinflammatory; neuroprotective; internalization; Clostridial toxin; lipid raft; cell membrane; hepatic insulin resistance; obesity; diabetes; hematopoietic condition; immuno-inflammatory condition; Alzheimers disease; thrombin receptor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                         Thrombin receptor peptide for lipid raft internalization inhibition.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAR47230 standard; peptide; 14 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Example 2; Page 12; 17pp; English
Ą.
AEA36659 standard; peptide; 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10-DEC-2003; 2003US-00732703.
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                                                                                                                                (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 25-MAR-2003 (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2005-434348/44.
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Best Local Similarity
Matches 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (LISS/) LI S.
(AOKI/) AOKI K R.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US2005129677-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Li S, Aoki KR;
                                                                                                                                                                                                                                                                                                                                                                                                 vesicle fusion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 7 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unidentified
                                                                                                                                25-AUG-2005
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Gaps

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0; Indels

Query Match 55.6%; Score 5; DB 2; Length 7; Best Local Similarity 100.0%; Pred. No. 2.1e+06; Matches 5; Conservative 0; Mismatches 0; Indel

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The invention relates to a novel serum-free medium for mammalian cells consisting of a basic medium, a cell viability protection agent, insulin and thrombin. The cell viability protection agent is selected from ADC-1, a protein hydrolysate or methyl cellulose. The invention also relates to a mammalian cell line adapted for production of a biologically active production in the serum-free medium. The serum-free medium is useful in the production of mammalian cell products, such as proteins, monoclonal antigons. Unlike previous serum-free culture media. The new medium has minimal additives, thereby being less costly, and does not contain intendents that are likely to complicate the culturing/

or production/purification processes. The present sequence represents a fragment of hamster thrombin used in place of native thrombin in an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nucleic acids encoding 4277 human colon cancer-associated polypeptides, useful for preventing, diagnosing and/or treating colorectal cancers.
                                                                            New serum-free medium consisting a basic medium, cell viability protection agent, insulin and thrombin useful in the production of mammalian cell products, such as proteins obtained by recombinant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human; colon cancer; colon cancer antigen; diagnosis; detection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human colon cancer antigen protein SEQ ID NO:8049.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  55.6%; Score 5; DB 4;
100.0%; Pred. No. 50;
iive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Rosen CA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 11; Page 9392; 9803pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAG77283 standard; protein; 18 AA.
                                                                                                                                                                        Example 7; Page 7; 23pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Birse CE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  28-SEP-2000; 2000WO-US026524.
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   (INTE-) INTERPHARM LAB LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ruben SM, Barash SC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   colorectal carcinoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2001-235357/24.
N-PSDB; AAH36690.
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Matches 5, Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5 FLRNP 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 14 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200122920-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     29-SEP-1999;
03-NOV-1999;
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                                                                                                                                 techniques
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     %XGXGCCCCCCCXXXXIIII
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The thrombin receptor activator is a component of a serum free medium for growing mammalian cells. The medium also comprises a viability protection agent, insulin and thrombin when thrombin receptor activators are absent. This sequence corresponds to amino acid residues 42-55 of the hamster thrombin receptor. See also AAR47228-R47231. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                Serum free medium for growing mammalian cells - contains viability protection agent, insulin and thrombin or thrombin receptor activator,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                      Thrombin; thrombin receptor activator; culture media; insulin; mammalian cell culture; serum free media.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cell viability protection agent, insulin, proteins production, monoclonal antibody, viral vaccine, hormone, enzyme,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Thrombin; hamster; serum-free medium; mammalian cell culture;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hamster thrombin receptor peptide, residues 42-55.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          55.6%; St. 100.0%; Pred. No. ... 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           esp. for recombinant protein prodn.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 8; Page 10; 22pp; English
                                                                                                                                                                                                                                              93EP-00113502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           24-AUG-1993; 2000EP-00117026.
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93EP-00113502.
                                   Thrombin receptor activator
(first entry)
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                                                                                                                                                                                                                                                                                                                    (INTE-) INTERPHARM LAB
                                                                                                                                                                                                                                                                                                                                                         Fischer D, Bracha M;
                                                                                                                                                                                                                                                                                                                                                                                               WPI; 1994-127641/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5 FLRNP 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 14 AA;
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                                                                                                                                                                                                                                              24-AUG-1993;
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12-SEP-1994
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24-AUG-1993;
                                                                                                                                                                                                       02-MAR-1994
                                                                                                                                                                  EP584788-A2
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                                                                                                                               Synthetic
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Best Loc Matches

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Gaps

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proteins are collectively known as colon cancer antigens. The colon cancer antigens have cytostatic activity and cancer antigens have cytostatic activity and can be used in gene therapy cancer antigens have cytostatic activity and can be used in gene therapy and vaccine production. N and P may be used in the prevention, diagnosis and treatment of diseases associated with inappropriate P expression. For example, N and P may be used to treat disorders associated with decreased carpession by rectifying mutations or deletions in a patient s genome that affect the activity of P by expressing inactive proteins or to supplement the patients own production of P. Additionally, N may be used to colon cancer-associated Ps, by inserting the nucleic acids into a host cell and culturing the cell to express the proteins. N and P carcinomas and cancers. Adally 196 to Additionally, and P perseent carcinomas and cancers. Adally 196 to Additionally and Perseent of colorectal carcinomas and cancers. Adally 196 to Adally 200 and Adally 198 to sequences used in the exemplification of the present invention. N.B. Pages 666 to 682 and page 7053 of the sequence listing were missing at time of publication, meaning no sequences are present for SEQ ID NO:1027
to AAH37195 and AAG73514 to AAG77788 represent human colon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            time of publication, me to 1052, 7921 and 7922
8888888888888888888888
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Sequence 18 AA;

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0; Indels
  Length 18;
 55.6%; Score 5; DB 4
100.0%; Pred. No. 62;
ive 0; Mismatches
                          5; Conservative
Query Match
Best Local Similarity
Matches 5; Conserv
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9 ESWFL 13
                                                    2 ESWFL 6
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Gaps

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ABB50666 standard; protein; 30 AA. 07-FEB-2002 (first entry) ABB50666; RESULT 13

Human secreted protein encoded by gene 44 SEQ ID NO:614.

Human; secreted protein; immunomodulatory; antisclerotic; anti-HIV; dermatological; immunosuppressive; antiinflammatory; immunostimulant; evfostedic; cardiant; vascular; anti-angiogenic; ophthalmological; neuroprotective; nootropic; anticonvulsant; antialzheimers; vulnerary; antiparkinsonian; antimicrobial; gene therapy; vaccine; immune disorder; multiple sclerosis; systemic lupus erythematosus; HIV infection; cancer; human immunodeficiency virus; hyperpoliferative disorder; wound healing; Gaucher's disease; cardiovacular disease; Scimitar syndrome; chemotexis; corneal graft neovascularisation; diabetic retinopathy; regeneration; neurological disorder; Huntington's chorea; Alzheimer's disease; parkinson's disease; infectious disease.

Homo sapiens

WO200162891-A2.

10-AUG-2001.

21-FEB-2001; 2001WO-US005614.

24-FEB-2000; 2000US-0184836P. 29-MAR-2000; 2000US-0193170P.

HUMA-) HUMAN GENOME SCI INC

Ni J, Ebner R, Lafleur DW, Moore PA, Olsen HS, Rosen CA; Ruben SM, Soppet DR, Young PE, Shi Y, Florence KA, Wei Y; Florence C, Hu J, Li Y, Kyaw H, Flscher CL, Ferrie AM, Fan P; Feng P, Endress GA, Dillon PJ, Carter KC, Brewer LA, Yu G, Zeng Z; Greene JM;

WPI; 2001-625724/72.

06-JUN-1997

06-JUN-1997 06-JUN-1997 06-JUN-1997

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proteins (1) and polynucleotide (II) sequences. (1) and (II) have various activities based on the tissues and cells the genes are expressed in.

Example of these activities include: immunomodulatory; antisclerotic; dermatclogical; immunosuppressive, antiinflammatory; immunostimulant; anti-angiogenic; ophthalmological; cardiant; anti-angiogenic; ophthalmological; cardiant; anti-angiogenic; ophthalmological; neuroprotective; nootropic; anticonvulsant; antialzheimers; vascular; neuroprotective; nootropic; and vulnerary. (1) and (II) can be used in gene therapy and vaccine production. (1) and (II) can be used in gene therapy and vaccine production. (1) and (II) can be used in the prevention, diagnosis and treatment of immune disorders (e.g. multiple sclerosis, systemic lupus erythematcous and human immunodeficiency virus (HIV) infections), hyperproliferative disorders (e.g. cancers and Gaucher's disease), cardiowysacular diseases (e.g. canters syndrome, chaga's cardiomyopathy and coronary arteriosclerosis), andiogenic disorders (e.g. corneal graft neovascularisation and diabetic retinopathy), neurological disorders (e.g. Huntington's chorea, Alzheimer's diseases and Parkinson's disease), infectious diseases and/or for promoting wound healing, regeneration and/or chemotaxis. ABA83185 to ABA83193 and ABB50300 represent sequences used in the exemplification of
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human; gene therapy, autoimmune disorder; multiple sclerosis; cancer; systemic lupus erythematosus; haematopoietic cell disorder; allergy; agammaglobulinaemia; ataxia telangiectasia; blood coagulation disorder; afibrinogenaemia; thrombocytopenia; graft-versus-host disease; arthritis; inflammatory condition; ischaemia-reperfusion injury; infectious disease; hyperproliferative disorder; purpura; viral infection; regeneration; bacterial infection; ulcer; Alzheimer's disease.
              Nucleic acids encoding 207 human secreted polypeptides, useful for preventing, diagnosing and/or treating, e.g. cancers, Parkinson's disease
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                                                                                              Disclosure; Page 101; 1533pp; English.
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                                                      and diabetic retinopathy.
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Matches 5; Conserv
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useful for preparing a composition for diagnosing or treating autoimmune disorders e.g. multiple sclerosis and systemic lupus erythematosus; considerate e.g. multiple sclerosis and systemic lupus erythematosus; considerate e.g. agammaglobulinaemia and ataxia telangiectasia; blood coagulation disorders e.g. aflbrinogenaemia and thrombocytopenia; allergy; graft-versus-host disease; inflammatory conditions e.g. ischaemia-reperfusion injury and arthritis; hyperproliferative disorders e.g. cancer and purpura; infectious disease e.g. viral infection and bacterial infection. The polymucleotide or protein can be used to regenerate damaged tissue e.g. ulcers and Alzhaimer's disease. The present sequence represents the amino acid sequence of a novel human secreted protein fragment. Note: The sequence data for this patent did not form part of the printed specification but was obtained in electronic format directly from uSPTO at sequence. Sequence chample of the printed specification but sequence uspto.gov/sequence.html?DocID=20030065160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Secreted protein; precerebellin-like protein; sepsis; acne; psoriasis; neurodegenerative disorder; behavioural disorder; Alzheimer's disease; Parkinson's disease; Huntington's disease; schizophrenia; mania; dementia; paranoia; psychosis; autism; immune disorder; infection; inflammation; allergy; liver disorder; hepatoblastoma; jaundice; hepatitis; immunological disorder; AIDS; leukaemia; rheumatoid arthritis;
     Moore PA, Shi Y, Florence C;
Fan P, Wei Y, Fischer CL, Soppet DR;
Feng P, Dillon PJ, Endress GA;
                                                                                                                                 New isolated protein, useful for preparing a composition for diagnosing or treating cancer, inflammatory, immune or infectious diseases.
                                                                                                                                                                                                                             invention relates to an isolated HEMAE80 protein. The protein is
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5. 99;
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Local Similarity 100.0%; Pred. No. 99;
les 5; Conservative 0; Mismatches
                                                                                                                                                                                       Disclosure; Page 26; 172pp; English.
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Florence K, Lafleur DW, Ni J;
Li Y, Zeng Z, Kyaw H, Yu G,
Carter KC;
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Ha J;

Ruben SM, Rosen CA,

Ferrie AM,

Young P, Greene JM,

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Gaps

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Soppet DR;

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The invention relates to an isolated protein comprising amino acid
residues 33-205 or 1-205 of a novel human secreted protein appearing as
ABD26252. The protein is encoded by one of 238 disclosed cDNA sequences
encoding 238 secreted proteins. ABD26252 is a precerebellin-like protein.
Also included are a composition comprising the protein and a carrier and
an isolated protein produced by expressing the protein cited above by a
cell, and recovering the protein. The proteins are useful for diagnosing
or treating neurodegenerative and behavioural disorders (e.g. Alzheimer's
disease, Parkinson's disease, Huntington's disease, exclizophrenia, mania,
dementia, paranola, psychoses or autient disorders (e.g. Alzheimer's
infection, inflammation, allergy), liver disorders (e.g. hepatoblastoma,
rheumatoid arthritis, sepsis, acne, psoriasis) and cancer. The present
sequence is a protein associated with one of the 238 disclosed novel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human, 5' EST; expressed sequence tag; secreted protein; diagnosis; gene therapy; chromosome mapping; upstream regulatory sequence; forensic; location; development; protein synthesis; stability; regulation;
                                                                             New precerebellin-like protein, useful for diagnosing or treating neurodegenerative and behavioral disorders, immune disorders, liver disorders, and cancer.
        Wei Y, Fischer CL, So
Dillon PJ, Endress GA;
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larity 100.0%; Pred. No. 99;
Conservative 0; Mismatches 0; Indels
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         а, a,
        Ni J, Fan
Yu G, Feng
                                                                                                                                       Disclosure; Col 48; 156pp; English.
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Li Y, Zeng Z, Kyaw H, Y
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                                                              WPI; 2003-511926/48.
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N-PSDB; AAZ42750.
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28-APR-1998;
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Moore PA, Shi Y, Florence C;
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Ebner R, Brewer LA,
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05-SEP-1997;
05-SEP-1997;
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05-SEP-1997;
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05-SEP-1997;
05-SEP-1997;
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05-SEP-1997;
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05-SEP-1997;
05-SEP-1997;
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Novel secreted protein 5' expressed sequence tag sequences used in

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Gaps

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AAZ42265 to AAZ43075 represent novel 5' expressed sequence tag (EST)

CC sequences, corresponding to human secreted proteins. AAY64651 to AAZ43052.

CC represent the EST-related proteins corresponding to AAZ42265 to AAZ43052.

CT be 5' ESTB can be used for producing secreted human gene products. They

CC can be used to identify and isolate 5' untranslated regions (UTRS) and

Upstream regulatory regions which control the location, development

CC stage, rate, and quantity of protein synthesis, as well as stability of

CMANA. The ESTB are also useful as probes for chromosome mapping, and to

CC chage, rate, and quantity of protein synthesis as well as stability of

CC mRNA. The ESTB are also useful as probes for chromosome mapping, and to

CC chage. The products may also be used in forensic

CC identify individuals having genetic diseases resulting from abnormal gene

CC cypression. The products may also be used in gene therapy protocols. The

CC conclinian secretion of a polypeptide or the insertion of a

CC collular secretion of a polypeptide or the insertion of a

CC proteins encoded by the EST sequences may be useful in treating a variety

CC human conditions. Secreted proteins have therapeutic value, and the

CI dentification of new secreted proteins is valuable. AAZ42249 to AAZ42264

CA the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
diagnostic, forensic, gene therapy, and chromosome mapping procedures.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Protein secretion; recombinant protein; diagnosis; mapping; forensic; gene therapy; signal peptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Signal peptide-containing polypeptide fragment, SEQ ID NO:1297.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                    55.6%; Score 5; DB 3; Length 35; 100.0%; Pred. No. 1.1e+02; ive 0; Mismatches 0; Indels
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/label= Mature_polypeptide_fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1. .22
/label= Signal_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Giordano J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                               Claim 3; Page 744; 837pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADU72700 standard; peptide; 35 AA.
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99WO-IB000712
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2004-812112/80.
N-PSDB; ADU71912.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3 SWFLR 7
                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 35 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US6822072-B1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21-DEC-1999;
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09-APR-1999;
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ADU72700
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The invention relates to an isolated or purified signal peptide consisting of residues 1.16 of ADU72234 (signal peptide given separately as ADU73026) which directs the extracellular secretion of a polypeptide to which it is oberably linked. The invention also relates to a method of producing the signal peptide. The invention also relates to a method of producing the signal peptide. The invention further discloses: isolated, encode all or a part of a secretory signal peptide; polypeptides encoded by these ESTS (EST-related polypeptides), antibodies which recognize the servated polypeptides; vectors and host cells computating EST-related nucleic acids of the invention; an array of ESTS; methods involving the use of ESTS of the invention, for example, in identifying a promoter in genomic DNA. The EST-encoded signal peptides of the invention of intentitying a promoter in generation of protein fusions comprising the invention can be used for directing the secretion or import of a cernical peptides. The ESTS, EST-encoded signal peptides of the invention can be used for forensic procedures, chromosome mapping, diagnostics, and therapeutic procedures, including gene therapy.

Sequences ADU72215-ADU72319 represent incomplete polypeptides comprising a signal peptide which are encoded by the 5' ESTS shown in ADU7427- by an application of the encoded by the 5' ESTS shown in ADU7427- of the brown of the encoded by the 5' ESTS shown in ADU7427- of the brown of the encoded by the 5' ESTS shown in ADU7427- of the brown of the encoded by the 5' ESTS shown in ADU7427- of the encoded by the 5' ESTS shown in ADU7427- of the encoded by the 5' ESTS shown in ADU7427- of the encoded by the 5' ESTS shown in ADU7427- of the encoded by the 5' ESTS shown in ADU7427- of the encoded by the 5' ESTS shown in ADU7427- of the encoded by the 5' ESTS shown in ADU7427- of the encoded and a for this patent did not form part of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADU72131. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly
                    New expressed sequence tags and encoded human proteins useful for diagnosing, preventing or treating diseases such as autoimmune disorders, inflammation, wounds or infections, or in forensic or chromosome mapping
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   expressed sequence tag; EST; expression; protein secretion; diagnostic; forensic; gene therapy; haplotype mapping.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human incomplete polypeptide including a signal peptide SEQ ID NO:1297.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           55.6%; Score 5; DB 8; Length 35; 100.0%; Pred. No. 1.1e+02; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             segdata.uspto.gov/sequence.html?DocID=US6822072.
                                                                                                                                      Example 15; SEQ ID NO 1297; 72pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Dumas MEJ, Duclert A, Giordano J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADZ73691 standard; peptide; 35 AA.
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98US-00069047.
99WO-IB000712.
99US-00471276.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      the US patent office at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       25-AUG-2004; 2004US-00926683
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Matches 5; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 35 AA;
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28-APR-1998;
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                                                                                              procedures.
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The invention relates to a novel purified nucleic acid (I) comprising any of (ADZ72418-ADZ73205) or (ADZ73994-ADZ74016) and their complements; at least 15 consecutive nucleotides of (I) and their complements; at any of 788 nucleotide sequences encoding (III) defined sequences of 16-255 amino acids (ADZ73206-ADZ73993). The invention discloses 5' EST's derived from RNAB encoding secreted proteins. The 5' EST's may be used to obtain compositions of the present invention are useful for expressing secreted proteins or its portions (claimed) or to obtain antibodies capable of specifically binding to the secreted proteins, and in diagnostic, forensic, gene therapy, and chromosome mapping procedures, and for designing expression vectors and secretion vectors. The present sequence is used in the exemplification of the invention. Note: The sequence data for this patent is not represented in the printed specification but is based on sequence information supplied in electronic format from the EST. USPTO web site sequence.html; bocument ID: 20050106595.
                                                                New purified nucleic acid expressing secreted proteins useful in forensic, gene therapy, and chromosome mapping procedures, and diagnosing or treating cancer, atherosclerosis and autoimmune diseases, diabetes, asthma and infections.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nucleic acids encoding Haemophilus transferrin receptor - used to prods for detection and in diagnosis, prevention and treatment of Haemophilus infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Loosmore S, Harkness R, Schryvers A, Chong P, Gray-Owen S;
Yang Y, Murdin A, Klein M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tbp1; Tbp2; transferrin receptor operon; vaccine; antigen; non-typable strain; Haemophilus influenzae; meningitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                55.6%; Score 5; DB 9; Length 35; 100.0%; Pred. No. 1.1e+02; ive 0; Mismatches 0; Indels
                                                                                                                                                         Claim 1; SEQ ID NO 1297; 79pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAR77907 standard; peptide; 36 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Antigenic Tbpl peptide TBP1-11
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              WPI; 2005-384300/39
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                               N-PSDB; ADZ72903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 35 AA;
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regions of the Tbp1 protein from H. influenzae strains Eagan, MinnA, Du63 and non-typable strain PAR12085. The transferrin receptor (TfR) operon consists of two genes (Tbp1 and Tbp2) arranged in tandem and which are transcribed from a single promoter. H. influenzae TfR is iron- and/or haemin-regulated and a putative fur-binding site has been identified upstream of tbp2. Antibodies blocking this binding site may prevent bacterial growth. Fragments of the TfR (or its genes) are useful in vaccines to provide protection against, e.g. bacterial meniagitis. An advantage of using the TfR is that it shares homology with TfR of other H. influenzae strains including non-typable strains. The present sequence shows residues 315-350 of Tbp1 from H. influenzae type b strain Di63 (see AAR77884), not residues 293-328 as stated in the specification. Numbering of the residues is said to be as for strain Di63.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAW46090-125 are predicted antigenic peptides derived from the Tbpl protein of Haemophilus influenzae type b. Tbpl is part of the transferrin receptor, of which Tbp2 is also a subunit. The deduced amino acid sequences of Tbpl and Tbp2 were compared, and regions of conservation
                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Haemophilus truncated transferrin receptor protein analogue, Tbp2 - 1 to induce protection against disease caused by transferrin producing pathogens, or as antigen to detect Haemophilus TfR antibodies.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Transferrin receptor; Haemophilus influenzae type b; iron;
human transferrin; iron source; antibody; bacterial growth; vaccine;
immunogenic truncated analogue; antigen; Tbp1; Tbp2.
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                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                      Score 5; DB 2; Length 36; Pred. No. 1.2e+02; 0; Mismatches 0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Predicted antigenic Tbpl peptide TBP1-11.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Example 16; Page 68; 228pp; English.
              Example 16; Page 70; 231pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAW46100 standard; protein; 36 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Loosmore SM, Harkness RE, Sc
Yang Y, Murdin AD, Klein MH;
                                                                                                                                                                                                                                                                                                                                                                      55.6%; £
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96US-00649518.
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                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 100.
Matches 5, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Synthetic.
Haemophilus influenzae.
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                                                                                                                                                                                                                                                                                                                                                                                                                                             3 SWFLR 7
                                                                                                                                                                                                                                                                                                                                       Sequence 36 AA;
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17-MAY-1996;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 20
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AAY80402 standard; peptide; 36 AA.
                                                                                                                                                                                                                                                                AAW53060;
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AAY80402
ID AAY80
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                                                                                                                                                                                                            RESULT
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identified. The above peptides are derived from these regions, the present peptide being derived from residues 293-328. Iron is an essential nutrient for the growth of these bacteria, and they can utilise human transferrin as a source of iron. Antibodies which block the access of the transferrin receptor to its iron source prevent bacterial growth. The transferrin receptor, or fragments, therefore, are good vaccine candidates. An immunogenic composition comprising (or encoding) the immunogenic truncated analogue can be used to induce protection against a disease caused by a bacterial pathogen that produces the transferrin receptor. The immunogenic truncated analogue is also useful as an antigen in immunoassasy for the detection of Haemophilus transferrin receptor antibodies, while the nucleic acid molecule can be used as a hybridisation probe for the detection of other transferrin receptor genes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This invention describes a novel isolated and purified nucleic acid (I) encoding an immunogenic, C-terminally truncated analog of one of the transferrin receptor proteins Tbpl or Tbp2 of Haemophilus influenzae which has antibacterial activity. (I) are detecting, and diagnosing of truncated Tbp; as probes and primers for detecting, and diagnosing infection by, Haemophilus, also for isolating similar sequences from other bacteria; as immunogens for vaccinating against infections caused by bacteria that produce transferrin receptors, e.g. Haemophilus, Neissearia or Branhamella. The truncated proteins are useful as immunogens (as above); for diagnosing infection (as antigens in immunoassays) and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      - used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Transferrin receptor; Tbp1; Tbp2; immunogenic; antibacterial; vaccine;
                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Haemophilus truncated transferrin receptor protein analogue, Tbp2 – v
to induce protection against disease caused by transferrin producing
pathogens, or as antigen to detect Haemophilus TfR antibodies.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Yang
                                                                                                                                                                                                       Score 5; DB 2; Lengtn 30,
Pred. No. 1.26+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Harkness R, Schryvers A, Gray-Owen S,
Lein M, Chong P;
                                                                                                                                                                                                             55.6%; Scor.
100.0%; Pred. No. 1...
... 0; Mismatches

    H. influenzae antigenic Tbpl peptide TBP1-11.

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                                                                                                                                                                                                                                                                                                                                                                       AAY51705 standard; protein; 36 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 93US-00148968.
93US-00175116.
94US-00337483.
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                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
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                                                                                                                                                                                                                                  Similarity 100
5; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Haemophilus influenzae
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 1997-052329/05
                                                                                                                                                                                                                                                                          7
                                                                                                                                                                                                                                                                                           SWFLR
                                                                                                                                                                                            Sequence 36 AA;
                                                                                                                                                                                                                                                                           SWFLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      07-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 08-NOV-1993;
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08-NOV-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                             13-JUN-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                diagnosis
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                                                                                                                                                                                                                    Query Match
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                                                                                                                                                                                                                                    Best Local
                                                                                                                                                                                                                                                Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Purification of recombinant Haemophilus transferrin-binding protein - by solubilising inclusion bodies separated from cell lysate.
immunization. AAY51695-Y31767 represent H. influenzae transferrin receptor proteins Tbpl and Tbp2 antigenic peptide fragments
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Peptides AAWS3050-WS3085 are derived from the Tbpl protein. The Tbpl protein is one of two proteins with genes found on the transferrin operon. These peptides can be used along with the genes, DNA sequences and recombinant proteins for diagnosis, immunisation and the generation of diagnostic and immunological reagents. They can also be used to protect from bacteria that produce transferrin receptor protein
                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chong
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              tbp1; tbp2; vaccine; H. influenzae; antibody; diagnosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    55.6%; Score 5; DB 2; Length 36; 100.0%; Pred. No. 1.2e+02; ive 0; Mismatches 0; Indels
                                                                                                                                      Length 36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      passive immunisation; transferrin receptor operon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Klein M, Harkness R, Loosmore S,
                                                                                                                                   Score 5; DB 2; Le:
Pred. No. 1.2e+02;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Example 16/17; Column 35-36; 261pp; English.
                                                                                                                                                                                                                                                                                                                                                                                        AAW53060 standard; peptide; 36 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tbpl antigenic peptide TBP1-11.
                                                                                                                                      55.6%; 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     93US-00148968.
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94US-00337483.
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                                                                                                                                                                                 5; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Schryvers A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Haemophilus influenzae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 1998-100410/09
                                                                                                                                 Query Match
Best Local Similarity
Matches 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                            3 SWFLR 7
                                                                                                                                                                                                                                                                       SWFLR 9
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                                                                                        Sequence 36 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US5708149-A
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21-APR-2000; 2000US-0199047P.
02-JUN-2000; 2000US-0208841P.
07-JUL-2000; 2000US-0216747P.
                                                                                       20-APR-2001; 2001WO-US012865.
Propionibacterium acnes.
                               WO200181581-A2
                                                           01-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 25
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                                                                                                                                                                                                                                                                                                                                                                                                                                                   Antibodies specific for transferrin receptor proteins of Haemophilus influenzae, useful for treating otitis media, epiglottitis, pneumonia and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The invention relates to novel antibodies (or monospecific antisera) specific for single transferrin receptor proteins (or immunogenic fragment) from strains of Haemophilus influenzae. This sequence corresponds to an epitope from the H. influenzae transferrin receptor protein Tbpl. The antibodies may be used for preventing and treating infections and disorders caused by H. influenzae, including bacterial meningitis, otitis media, epiglottitis, pneumonia and tracheboronchitis. The antibodies may also be used detect the presence of H. influenzae proteins in samples according to standard methodologies (e.g. enzyme linked immunosorbant assay (ELISA)) and hence diagnose infections
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SAPHO syndrome; synovitis; acne; pustulosis; hypertosis; osteomyelitis; uveitis; endophthalmitis; bone; joint; central nervous system; ELISA; inflammatory lesion; acne vulgaris; enzyme linked immunosorbent assay; dermatological; osteopathic; neuroprotectant.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                             Chong P, Gray-Owen S, Yang Y, Klein M;
                                                                                                      Antibacterial; antiinflammatory; auditory; respiratory; antibody; antiserum; transferrin receptor; immunogen; epitope; otitis media; bacterial meningitis; epiglottitis; pneumonia; tracheobronchitis.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 3; Length 36; . 1.2e+02; ches 0; Indels
                                                                          H. influenzae transferrin receptor Tbpl epitope TBP1-11.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Propionibacterium acnes immunogenic protein #14444.
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100.0%; Pred. No. 1.2
cive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Disclosure, Col 37-38; 252pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAU53548 standard; protein; 50 AA.
                                                                                                                                                                                                                                                                                   93US-00148968.
93US-00175116.
95US-00337483.
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                                              06-JUN-2000 (first entry)
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                                                                                                                                                                                                                                                                                                                                               (CONN-) CONNAUGHT LAB LTD
                                                                                                                                                                                                                                                                                                                                                                             Harkness R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity 100.
Matches 5; Conservative
                                                                                                                                                                                                                                                                                                                                                                                           Schryvers A;
                                                                                                                                                                   Haemophilus influenzae
                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2000-096387/08.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     influenzae, useful
tracheobronchitis.
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                                                                                                                                                                                                                                                                                                                   08-NOV-1995;
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                                                                                                                                                                                                                                                                                                                                                                             Loosmore S,
                                                                                                                                                                                                                           28-DEC-1999
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                 AAY80402;
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Sequences AAU39105-AAU68017 represent Propionibacterium acnes immunogenic polypeptides. The proteins and their associated DNA sequences are used in the treatment, prevention and diagnosis of mediacal conditions caused by a canes. The disorders include SAPHO syndrome (synovitis, acne, pustulosis, hypertosis and osteomyelitis), uveitis and endophthalmitis. P. acnes is also involved in infections of bone, joints and the central nervous system, however it is particularly involved in the inflammatory lesions associated with acne vulgaris. A method for detecting the presence or absence of P. acnes in a patient comprises contacting a sample with a binding agent that binds to the proteins of the invention and determining the amount of bound protein in the sample. The polypeptides may be used as antigens in the production of antibodies polypeptides may be used as antigens in the production of antibodies contacting the capression and activity of P. acnes polypeptides and therefore treat P. acnes infections. The antibodies may also be used the cherefore treat P. acnes infections. The antibodies may also be used as diagnostic agents for determining P. acnes presence, for example, by enzyme linked immunosorbent assay (ELISA). Note: The sequence data for this patent did not form part of the printed specification, but was considered in electronic format directly from NIPO at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                             Propionibacterium acnes polypeptides and nucleic acids useful for vaccinating against and diagnosing infections, especially useful for treating acne vulgaris.
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                                                                      Mitcham JL, Wang SS, Bhatia A; , Jen S, Carter D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Example 1; SEQ ID NO 14743; 1069pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ftp.wipo.int/pub/published_pct_sequences
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                                                                          Skeiky YAW, Persing DH, Mi
L'maisonneuve J, Zhang Y,
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(CORI-) CORIXA CORP.
                                                                                                                                                                                                 WPI; 2001-616774/71.
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Best Local Similarity
Matches 5; Conserv
                                                                                                                                                                                                                                       N-PSDB; AAS59561.
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Human genome-derived single exon nucleic acid probes useful for analyzing gene expression in human cervical epithelial cells.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The present invention relates to human single exon nucleic acid probes (SENP: see AAI10068-AAI28459). The present sequence is a peptide encoded by one such probe. The SENPs are derived from human HeLa cells. The SENPs can be used to produce a single exon microarray, which can be used for measuring human gene expression in a sample derived from human cervical epithelial cells. By measuring gene expression, the probes are therefore useful in grading and/or staging of diseases of the cervix, notably cervical cancer. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences
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2000US-0236359P.
2000GB-00024263.
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2000US-00608408.
2000US-00632366.
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26-MAY-2000; 2000US-0207456P.
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Best Local Similarity
Matches 5; Conserv
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          cervical cancer.
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                                                                               Homo sapiens.
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27-SEP-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The invention relates to an isolated polynucleotide (ACF64415-ACF64733)

cncoding a Propionibacterium acres protein. The invention also relates to polypeptides encoded by the polynucleotides (ABM35624-ABM64536) and to immunogenic fragments of P. acres polypeptides. The invention additionally encompasses expression vectors and host cells comprising a difficiently encompasses expression vectors and host cells comprising a polypeptide of the invention; and proteins comprising a polypeptide of the invention; and proteins comprising a polypeptide of the invention; and method for stimulating an immune response specific for a P. acres polypeptides, antibodies, fusion proteins, T cell populations, or antigen-presenting cells that express the polypeptides, and a method for inhibiting the development of P. acres in a patient; and a method for inhibiting the development of P. acres in a patient. The P. acres polypeptides, polypeptides, antibodies, fusion proteins, T cell populations or antigen-presenting cells that express the collypeptides are useful for inhibiting the development of P. acres in a patient. The polymentions or antigen-presenting cells that express the polypeptides are useful for diagnosing, preventing or treating acre vulgaris, or for stimulations or antigen-presenting or treating acre culculation of an immune response specific for a P. acres protein. The polymuleotides can also be used as probes or primers for nucleic acid hybridisation. The vaccine composition is useful for the estimulation of an immune response capaints P. acres; or for stimulation capacing adjagnostic assay. The present sequence represents a polypeptide predicted to be encoded by an ORF (open cadding frame) contained within the P. acres polymuleotides of the primited specification, but was obtained in electronic format directly for the primited specification, and the proper format directly acres in the primited specification, and the proper format directly acres in the primited specification.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New Propionibacterium acnes polypeptides and polynucleotides encoding the polypeptide, useful for diagnosing, preventing or treating acne vulgaris, or for stimulating an immune response specific for a P. acnes protein.
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Jones R, Carter D;
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Benson DR,
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ive 0; Mismatches
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Lodes MJ,
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Zhang Y, Wang S, Jen S, Lod
Barth B, Vallieve-Douglass J;
                                                                                                                                  11-OCT-2002; 2002WO-US032727.
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Best Local Similarity 100.
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N-PSDB; ACF64490.
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WO2003033515-A1
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RESULT 26 AAM21922

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Chen W,

Hanzel DK,

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The invention relates to a single exon nucleic acid probe for measuring human gene expression in a sample derived from human foetal liver. The single exon nucleic acid probes may be used for predicting, measuring and displaying gene expression in samples derived from human fetal liver. The present sequence is a peptide encoded by a single exon nucleic acid probe of the invention. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences
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                                                                                                                                                            n genome-derived single exon nucleic acid probes useful for analyzing expression in human fetal liver.
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                                                                                                                                                                                                    Claim 27; SEQ ID NO 36934; 639pp + Sequence Listing; English
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. 1.8e+02;
ches 0; Indels
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100.0%; Pre
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30-JUN-2000; 2000US-00608408.
03-AUG-2000; 2000US-0053266.
21-SEP-2000; 2000US-0234687P.
27-SEP-2000; 2000US-0235959P.
04-OCT-2000; 2000GB-00024263.
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Best Local Similarity 100.
Matches 5, Conservative
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                                                                                                                                  WPI; 2001-483447/52
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                                                          The present invention relates to single exon nucleic acid probes (SENP: see AA131315-AA157546). The present sequence is a peptide encoded by one such probe. The probes are useful for producing a microarray for predicting, measuring and displaying gene expression in samples derived from human placenta. The probes are useful for antenatal diagnosis of human genetic disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Protein #9158 encoded by probe for measuring heart cell gene expression.
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cardiovascular disease, hypertension, cardiac arrhythmia,
                                                                                                                                                                                                                 Length 60;
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les 0;
                                                                                                                                                                                                                 DB 4;
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100.0%; Pred. No. 1.8
ive 0; Mismatches
                                Claim 27; SEQ ID NO 38519; 654pp; English.
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gene expression in human placenta
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30-JUN-2000; 2000US-00608408.
03-AUG-2000; 2000US-00632566.
21-SEP-2000; 2000US-0234687P.
27-SEP-2000; 2000US-0234587P.
04-OCT-2000; 2000GB-00024263.
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nes 5; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2001-488899/53
                                                                                                                                                                                                                                                                                                               SWFLR 10
                                                                                                                                                                                                                                                                              3 SWFLR 7
                                                                                                                                                                                Sequence 60 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200157274-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              04-FEB-2000;
26-MAY-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                23-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               09-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                              ABB27159
                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Penn SG,
                                                                                                                                                                                                                                  Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                               RESULT 29
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probes which are derived from genomic sequences expressed in the human brain. They can be used to measure gene expression in brain cell samples, which may enable the diagnosis and improved treatment of nervous system diseases such as Alzheimer's disease, multiple sclerosis, schizophrenia, epilepsy and cancers. The present sequence is a protein encoded by one of the probes of the invention
                                                                                                                                                                Human; brain expressed exon; gene expression analysis; probe; microarray; Alzheimer's disease; multiple sclerosis; schizophrenia; epilepsy; cancer.
                                                                                                                             Human brain expressed single exon probe encoded protein SEQ ID NO: 37441.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Single exon nucleic acid probes for analyzing gene expression in human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The present invention provides a number of single exon nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human, liver, cirrhosis, hyperlipoproteinaemia, hyperlipidaemia,
hypercholesterolaemia, coronary heart disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Example 4; SEQ ID NO 37441; 650pp + Sequence Listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   55.6%; Score 5; DB 4; Length 60; 100.0%; Pred. No. 1.8e+02; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chen W, Rank DR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human liver peptide, SEQ ID No 38316.
                        AAM65336 standard; protein; 60 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ABG59668 standard; peptide; 60 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (MOLE-) MOLECULAR DYNAMICS INC
                                                                                                                                                                                                                                                                                                                                                                               2000US-0207456P.
                                                                                                                                                                                                                                                                                                                                                                                                                 03-AUG-2000; 2000US-00632366.
21-SEP-2000; 2000US-0234687P.
7-SEP-2000; 2000US-0236359P.
04-OCT-2000; 2000GB-00024263.
                                                                                                                                                                                                                                                                                                                           30-JAN-2001; 2001WO-US000667
                                                                                            (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hanzel DK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2001-483446/52
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Best Local Similarity
Matches 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SWFLR 10
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 60 AA;
                                                                                                                                                                                                                                                       WO200157275-A2
                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                               26-MAY-2000;
                                                                                                                                                                                                                                                                                                                                                             04-FEB-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sapiens
                                                                                          05-NOV-2001
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                                                                                                                                                                                                                                                                                          09-AUG-2001
                                                         AAM65336;
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ABG59668
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The present invention provides a number of single exon nucleic acid probes which are derived from genomic sequences expressed in the human bone marrow. They can be used to measure gene expression in bone marrow samples, which may enable the improved diagnosis and treatment of cancers such as lymphoma, leukaemia and myeloma. The present sequence is a protein encoded by one of the probes of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human genome-derived single exon nucleic acid probes useful for analyzing
specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                               Human; bone marrow expressed exon; gene expression analysis; probe; microarray; cancer; leukaemia; lymphoma; myeloma.
                                                                                                                                                                                                                                                                                                                                                                                            Human bone marrow expressed probe encoded protein SEQ ID NO: 38337.
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                                                                                                                           0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  55.6%; Score 5; DB 4; Length 60; 100.0%; Pred. No. 1.8e+02; ive 0; Mismatches 0; Indels
                                                                                        Length 60;
                                                                                      55.6%; Score 5; DB 4; Le
100.0%; Pred. No. 1.8e+02;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Rank DR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gene expression in human bone marrow.
                                                                                                                                                                                                                                                                                     AAM78031 standard; protein; 60 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26-MAY-2000; 2000US-0207455P.
30-JUN-2000; 2000US-00608408
03-AUG-2000; 2000US-00532366.
21-SEP-2000; 2000US-0234687P.
27-SEP-2000; 2000US-023559P.
04-OCT-2000; 2000GB-00024263.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chen W,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-JAN-2001; 2001WO-US000668
                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                    Ouery Match
Best Local Similarity luv...
S; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2001-488900/53
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SWFLR 10
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|||||
SWFLR 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                             3 SWFLR 7
                                                     Sequence 60 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 60 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200157276-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              04-FEB-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                         06-NOV-2001
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                                                                                                                                                                                                                                                                                                                      AAM78031;
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RESULT 31

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Gaps

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Indels

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The invention relates to a single exon nucleic acid probe (SENP) [1] for measuring human gene expression in a sample derived from human adult liver. comprising one of 13109 defined nucleotide sequences given in the specification (or complements fragments). The probe hybridises at high stringency to a nucleic acid molecule expressed in the human adult liver. (I) may be used for predicting, measuring and displaying gene expression in samples derived from human adult liver. The genes identified may be hyperlipoproteinmenia, hyperlipideamia and hypercholesterolaemia which is associated with coronary heart disease. ABG47348-ABG5930 represent human liver single exon encoded peptides of the invention. Note: The sequence but was obtained in electronic format discetly from WIPO at the printed specification for the print in the printed specification for wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                            Human genome-derived single exon nucleic acid probes useful for analyzing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human peptide encoded by genome-derived single exon probe SEQ ID 36711.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          chronic obstructive pulmonary disease; interstitial lung disease; familial idiopathic pulmonary disease; interstitial lung disease; tuberous sclerosis; gaucher's disease; Niemann-Pick disease; pulmonary histiocytosis; lymphangioleiomyomtosis; karagener syndrome; sarcoidosis; pulmonary histiocytosis; lymphangioleiomyomtosis; karagener syndrome; pulmonary histocytosis; lymphangioleiomyomtosis; karagener syndrome; primary cillary dyskinesis; pulmonary hypertension; hypertension; hypline membrane disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human; single exon probe; asthma; lung cancer; COPD; ILD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 4; Length 60; . 1.8e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       55.6%; Score 5; DB 4
100.0%; Pred. No. 1.8
:ive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 27; SEQ ID NO 38316; 658pp; English
                                                                                                                                                                                                                                                                                                  Chen W, Rank DR
                                                                                                                                                                                                                                                                                                                                                                                               gene expression in human adult liver.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ABG47046 standard; peptide; 60 AA.
                                                                                                                                                                                                                                                             (MOLE-) MOLECULAR DYNAMICS INC
                                                                                                                                                             03-AUG-2000; 2000US-00632366.
21-SEP-2000; 2000US-0234687P.
27-SEP-2000; 2000US-0236359P.
04-OCT-2000; 2000GB-00024263.
                                                                                                                                26-MAY-2000; 2000US-0207456P.
30-JUN-2000; 2000US-00608408.
                                                                        30-JAN-2001; 2001WO-US000664
                                                                                                               04-FEB-2000; 2000US-0180312P
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Best Local Similarity 100...
Best S; Conservative
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                                                                                                                                                                                                                                                                                                  Penn SG, Hanzel DK,
                                                                                                                                                                                                                                                                                                                                     WPI; 2001-488898/53.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SWFLR 10
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 60 AA;
WO200157273-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                     09-AUG-2001
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Gaps .

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The invention relates for a spatially addressable set of single exon uncleic acid probes for measuring gene expression in a sample derived from human lung comprising single exon nucleic acid probes having one of 12614 nucleic acid sequences mentioned in the specification, or their complements or the 12819 open reading frames derived from the 12619 openes. Also included are a microarray comprising the novel set of probes so in the numan lung; measuring gene expression in a sample derived from human lung; comprising (a) contecting the nucleic acid derived from human lung; measuring gene expression in a sample collection of detectably labeled nucleic acids derived from human lung cand collection of detectably labeled nucleic acids derived from human lung according a evaluation of detectably bound to each probe of the array; identifying exons in a evaluaty bound to each probe of the array; identifying exons in a evaluaty of the exons from genomic sequences of algorithmically predicted and (b) measuring the predicted exon, the probe is included in the above mentioned microarray; assigning exons to a single exon probe. In the above mentioned microarray; assigning exons to a single exon probe in the above mentioned microarray; assigning exons to a single exon for and (b) measuring the expression of each of the exons in several crassurant the exons in the specification, or encoded by the expression of the exons in the tissues and/or call types using hybridisation to a single exon analysis, and for identifying exons in a gene; particularly using human control of the sexons in a gene; particularly using human control of interestical lung cancer, chronic obstructive pulmonary disease (COPD), interstitial lung cancer, chronic obstructive pulmonary disease (COPD), interstitial lung cancer, chronic obstructive pulmonary disease (COPD), interstitial lung cancer, chronic obstructive pulmonary disease where a common part expenses of the printed spacefication, but was obtained by asingle exon probe of the invention. Note: The se
                                                                                                                                                                                                                                                                                                                                                                                                                        Spatially-addressable set of single exon nucleic acid probes, used to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The invention relates to a spatially-addressable set of single exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 directly from WIPO at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                55.6%; Score 5; DB 5; Le 100.0%; Pred. No. 1.8e+02; ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                             measure gene expression in human lung samples.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 27; SEQ ID NO 36711; 634pp; English
                                                                                                                                                                                                                                                                                                                                         Penn SG, Hanzel DK, Chen W, Rank DR;
                                                                                                                                                                                                                                                                                             (MOLE-) MOLECULAR DYNAMICS INC
                                                                                 2001WO-US000665
                                                                                                                                              2000US-0207456P
2000US-00608408
                                                                                                                                                                                        03-AUG-2000; 2000US-00632366
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2000US-0236359P
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Best Local Similarity 100..
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WO200186003-A2
                                                                              30_JAN-2001;
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27-SEP-2000;
                                                                                                                          04-FEB-2000;
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Indels

Pred. No. 2e+02;

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The present invention describes substantially purified human proteins (referred to as open reading frame, ORFX, where X is 1-11491 (see Table 1 Con in the specification). ABN15762 to ABN27522 encode the human ORFX proteins given in ABP00010 to ABP11500 ORFX proteins are useful for treating or preventing a pathology associated with an ORFX-associated disorder in humans, and in the manufacture of a medicament for treating of syndrome associated with ORFX-associated disorder. ORFX polymoleotide contract and in the manufacture of a medicament for treating expuences can be used in gene therapy. ORFX sequences can be used in the treatment of cancer, hyperproliferative disorders, cirrhosis of liver, psoriasis, benign tumours, keloid, degenerative disorders, haemorrhage, catecoarthritis, neurodegenerative disorders, disorders related to organ transplantation, cardiovascular diseases, disorders mellitus, systemic contrapolatical intections munance disorders such as multiple sclerosis, infectious ciscases, various immune deficiencies and disorders, infectious diseases, autoimmune disorders such as multiple sclerosis, rheumatoid arthritis, autoimmune thyroiditis, myasthenia gravis, graft-versus-host diseases and autoimmune disorders such as multiple sclerosis, rheumatoid arthritis, autoimmune thyroiditis, myasthenia gravis, graft-versus-host diseases and autoimmune thyroiditis, myasthenia gravis, graft-versus-host diseases and autoimmune thyroiditis, myasthenia gravis, graft-versus-host diseases and autoimmune disorders, or periodoral disease, and for gut protection or regeneration and treatment of lung or liver fibrosis, reperfusion injury in various tissues and conditions resulting from protection or regeneration and treatment of lung or liver fibrosis, reperfusion injury in various tissues and conditions resulting batent did not form part of the printed specification, but was obtained in electronic confirmat directly from WIPO at ftp. hulpo.int/published_pot_escription and electronic confirmat disease.
                                                                                                                                                                                                                                                Human; open reading frame; ORFX; gene therapy; cancer; cirrhosis; hyperproliferative disorder; psoriasis; benign tumour; haemorrhage; degenerative disorder; osteoarthritis; neurodegenerative disorder; cardiovascular disease, diabetes mellitus; systemic lupus erythematosus; hypertension; hypothyroidism; cholesterol ester storage disease; immune deficiency; immune disorder; infectious disease; autoimmune disorder; rheumatoid arthritis; autoimmune thyroiditis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Novel human polypeptides and polynucleotides useful for diagnosing, preventing and treating cardiovascular disease, neurodegenerative, hyperproliferative disorders and autoimmune disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Disclosure; SEQ ID NO 15810; 1037pp; English.
                                                                                                                                                                                                   Human ORFX protein sequence SEQ ID NO:15810.
                                               ABP07914 standard; protein; 67 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      29-MAY-2001; 2001WO-US010836.
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29-AUG-2000; 2000US-0228716P.
                                                                                                                                                 (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2002-106308/14.
                                                                                                                                                                                                                                                                                                                                                                                                                                   myasthenia gravis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N-PSDB; ABN23666
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens.
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                                                                                                 ABP07914;
RESULT 34
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55.6%; Score 5; DB 5;

Query Match

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cerebral ischaemia; angiogenesis; nervous system disorder;
Alzheimer's disease; infection; ocular disorder; corneal infection;
wound healing; epithelial cell proliferation; food additive.
                                                                                                                                           immunomodulator; cardiovascular; cytostatic; nephrothropic;
cardiovascular; autoimmune disease; rheumatoid arthritis;
hyperproliferative disorder; breast neoplasm; cancer;
cardiovascular disorder; cardiac arrest; cerebrovascular disorder;
                                                                                                                                   Human; foetal tissue antigen; antiinflammatory; neuroprotective;
                                                                                                                 Human novel foetal antigen, SEQ ID NO 1145.
                                                           AAU20901 standard; protein; 68 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000US-0229343P
                                                                                               17-DEC-2001 (first entry)
                FLRNP 51
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2000US-0241808P.
2000US-0241809P.
2000US-0241826P.
2000US-0244617P.
2000US-0246474P.
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2000US-0246476P.
2000US-0246477P.
2000US-024623P.
2000US-024623P.
2000US-0246523P.
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2000US-0246527P.
2000US-0246528P.
2000US-0246532P.
2000US-0246609P.
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2000US-0240960P.
2000US-0241221P.
2000US-0241785P.
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2000US-0235484P.
2000US-0235834P.
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2000US-0236368P.
2000US-0236369P.
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2000US-0237037P.
2000US-0237038P.
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2000US-0241787P.
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2000US-0246611P.
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2000US-0249207P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          17-NOV-2000; 2000US-0249211P
17-NOV-2000; 2000US-0249212P
17-NOV-2000; 2000US-0249213P.
                                                                                                                             2000US-0231243P.
2000US-0231244P.
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2000US-0234223P.
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2000US-0236327P.
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2000US-0237040P.
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The invention relates to novel nucleic acids encoding novel human foetal antigens. The nucleic acids and proteins are used to prevent, treat (e.g. antigens. The nucleic acids and proteins are used to prevent, treat (e.g. rabbits, goats, horses, cats, dogs, chickens or sheep. They are also used in diagnosing a pathological condition or susceptibility to a pathological condition. The antibodies to the antigens can also be used in alleviating symptoms associated with the disorders and in diagnostic immunoassays e.g. radioimmunoassays or enzyme linked immunosorbent assays (ELISA). Disorders which are diagnosed or treated include autoimmune diseases e.g. rheumatoid arthritis, hyperproliferative disorders e.g. choplasms of the breast or liver, cardiovascular disorders e.g. cardiac arrest, cerebrovascular disorders e.g. cardiac arrest, cerebrovascular disorders e.g. cardiac arrest, cerebrovascular disorders e.g. cardiac arrest, cerebrovascular disorders e.g. corneal infection. Corner of the polypeptides can also be used to aid wound healing and epithelial correct in the polypeptides can also be used to aid wound healing and epithelial corgans before transplantation, for supporting cell culture of primary tissues, to regenerate tissues and in chemotaxis. The polypeptides can also be used to aid wound healing and epithelial corgans before transplantation, for supporting cell culture of primary tissues, to regenerate tissues and in chemotaxis. The polypeptides can also be used as a food additive or preservative to increase or decrease storage capabilities, fat content, lipid, protein, carbohydrate, correct or also be used as a food additive or preservative to increase or decrease cordinary and expense transplantation to be used to aid distince to increase or decrease experience of diseases and disorders treated by the nucleic acids and expense the particle or preservative to increase or decrease expense and disorders treated by the nucleic acids and protein in the preservative protein remains and protein in the protein r
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New polynucleotides and polypeptides for diagnosing, treating, preventing or prognosing e.g. diseases or disorders of the nervous, musculoskeletal, excretory, gastrointestinal, reproductive, and respiratory systems.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rosen CA, Barash SC, Ruben SM;
                 2000US-0249215P.
2000US-0249216P.
2000US-0249217P.
2000US-0249218P.
                                                                                                           2000US-0249244P.
2000US-0249245P.
2000US-0249264P.
                                                                                                                                                                               2000US-0249265P.
2000US-0249297P.
2000US-0249299P.
2000US-0249300P.
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2000US-0256719P.
2000US-0251479P.
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2000US-0250391P.
2000US-0251030P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000US-0251990P
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08-SEP-2000; 2000US-0232081P.
14-SEP-2000; 2000US-0232398P.
14-SEP-2000; 2000US-0232398P.
14-SEP-2000; 2000US-0232399P.
14-SEP-2000; 2000US-0232399P.
14-SEP-2000; 2000US-0232399P.
14-SEP-2000; 2000US-0232399P.
14-SEP-2000; 2000US-0233063P.
14-SEP-2000; 2000US-0233063P.
14-SEP-2000; 2000US-0233063P.
14-SEP-2000; 2000US-0233063P.
14-SEP-2000; 2000US-0233063P.
14-SEP-2000; 2000US-0233063P.
14-SEP-2000; 2000US-0233063P.
14-SEP-2000; 2000US-0233063P.
14-SEP-2000; 2000US-0233063P.
14-SEP-2000; 2000US-0233063P.
14-SEP-2000; 2000US-0233063P.
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15-SEP-2000; 2000US-0234999P.
15-SEP-2000; 2000US-0234999P.
15-SEP-2000; 2000US-0234999P.
15-SEP-2000; 2000US-0234999P.
15-SEP-2000; 2000US-0234999P.
15-SEP-2000; 2000US-0234999P.
15-SEP-2000; 2000US-0234999P.
13-OCT-2000; 2000US-02346478P.
13-OCT-2000; 2000US-02346478P.
13-OCT-2000; 2000US-02346478P.
13-OCT-2000; 2000US-02346478P.
13-OCT-2000; 2000US-02346478P.
13-OCT-2000; 2000US-02346478P.
13-OCT-2000; 2000US-02346478P.
13-OCT-2000; 2000US-02346478P.
13-OCT-2000; 2000US-02346478P.
13-OCT-2000; 2000US-02346478P.
13-OCT-2000; 2000US-02346478P.
13-OCT-2000; 2000US-02346528P.
13-OCT-2000; 2000US-02346528P.
13-OCT-2000; 2000US-02346528P.
13-OCT-2000; 2000US-02346528P.
13-OCT-2000; 2000US-02346528P.
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13-OCT-2000; 2000US-02346528P.
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13-OCT-2000; 2000US-02346528P.
13-OCT-2000; 2000US-02346528P.
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13-OCT-2000; 2000US-02346528P.
13-OCT-2000; 2000US-02346528P.
13-OCT-2000; 2000US-02346528P.
13-OCT-2000; 2000US-02346528P.
13-OCT-2000; 2000US-02346528P.
13-OCT-2000; 2000US-02346528P.
13-OCT-2000; 2000US-02346528P.
13-OCT-2000; 2000US-02346528P.
13-OCT-2000; 2000US-02346528P.
13-OCT-2000; 2000US-02346528P.
13-OCT-2000; 2000US-02346528P.
13-OCT-2000; 2000US-0234653
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2000US-0249218P.
2000US-0249244P.
2000US-0249245P.
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2000US-0249299P.
2000US-0249300P.
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17-NOV-2000;
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                                                                                                                                                                                                                                                                                                                                                                               31-JAN-2000; 2000US-0119065P.

24-FEB-2000; 2000US-018662BP.
22-FEB-2000; 2000US-018664P.
22-MAR-2000; 2000US-0189874P.
16-MAR-2000; 2000US-0198974P.
17-MAR-2000; 2000US-0198974P.
18-MAY-2000; 2000US-0198974P.
19-MAY-2000; 2000US-0198967P.
28-JUN-2000; 2000US-0214886P.
29-JUN-2000; 2000US-0214886P.
20-JUL-2000; 2000US-021489P.
11-JUL-2000; 2000US-021489P.
11-JUL-2000; 2000US-02148P.
11-JUL-2000; 2000US-021864P.
11-JUL-2000; 2000US-021869P.
26-JUL-2000; 2000US-021869P.
26-JUL-2000; 2000US-021869P.
26-JUL-2000; 2000US-022514P.
14-AUG-2000; 2000US-0225214P.
14-AUG-2000; 2000US-0225214P.
14-AUG-2000; 2000US-0225214P.
14-AUG-2000; 2000US-0225214P.
14-AUG-2000; 2000US-0225214P.
14-AUG-2000; 2000US-0225214P.
14-AUG-2000; 2000US-0225214P.
14-AUG-2000; 2000US-0225314P.
14-AUG-2000; 2000US-0225314P.
14-AUG-2000; 2000US-0225314P.
14-AUG-2000; 2000US-0225314P.
14-AUG-2000; 2000US-0225314P.
15-AUG-2000; 2000US-0225314P.
16-AUG-2000; 2000US-0225314P.
16-AUG-2000; 2000US-0229314P.
16-SEP-2000; 2000US-0229314P.
16-SEP-2000; 2000US-0229314P.
16-SEP-2000; 2000US-0229314P.
16-SEP-2000; 2000US-0229314P.
16-SEP-2000; 2000US-0229314P.
16-SEP-2000; 2000US-0229314P.
16-SEP-2000; 2000US-0229314P.
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16-SEP-2000; 2000US-0229314P.
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16-SEP-2000; 2000US-0239314P.
16-SEP-2000; 2000US-0239314P.
16-SEP-2000; 2000US-0239314P.
16-SEP-2000; 2000US-0339314P.
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9905-0127462P

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                                                                                                                                                                                                                                                         The present invention provides the protein and coding sequences of a number of human digestive system antigens. These can be used in the diagnosis, treatment and prevention of digestive system disorders, including cancer, Meckel's diverticulum, bacterial or parasitic infections, appendicitis, Hirschsprung's disease, chronic colitis or ulcerative colitis. The present sequence is a digestive system antigen of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Protein identification; signal transduction pathway; metabolic pathway; hybridisation assay; genetic mapping; gene expression control; promoter; termination sequence.
                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                    Polynucleotides encoding digestive system antigens, useful for diagnosing, treating, preventing and/or prognozing disorders of the digestive system, particularly cancer and cancer metastases.
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01-DEC-2000; 2000US-0250160P.

05-DEC-2000; 2000US-025131P.

05-DEC-2000; 2000US-025138P.

05-DEC-2000; 2000US-025198P.

06-DEC-2000; 2000US-0251479P.

08-DEC-2000; 2000US-0251868P.

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Protein identification; signal transduction pathway; metabolic pathway; hybridisation assay; genetic mapping; gene expression control; promoter; termination sequence.
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RR 25-MAR-1999; 99US-0128714P.

RR 06-APR-1999; 99US-0128714P.

RR 19-APR-1999; 99US-0128744P.

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20-JUL-1999; 21-JUL-1999; 21-JUL-1999; 21-JUL-1999; 22-JUL-1999; 22-JUL-1999; 22-JUL-1999; 23-JUL-1999; 23-JUL-1999; 23-JUL-1999; 23-JUL-1999; 23-JUL-1999; 23-JUL-1999; 23-JUL-1999; 24-MG-1999; 24-MG-1999; 24-MG-1999; 25-AUG-1999; 26-AUG-1999; 27-JUL-1999; 27-JUL-1999; 27-JUL-1999; 27-JUL-1999; 28-JUL-1999; 28-JUL-1999; 28-JUL-1999; 27-AUG-1999; 28-JUL-1999; 28-JUL-1999; 28-JUL-1999; 27-AUG-1999; 28-JUL-1999; 27-AUG-1999; 28-JUL-1999; 28-JU	12-OCT-1999; 13-OCT-1999; 13-OCT-1999; 13-OCT-1999; 14-OCT-1999; 14-OCT-1999;
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(SENP: see AAI10068-AAI28459). The present sequence is a peptide encoded by one such probe. The SENPs are derived from human Hela cells. The SENPs can be used to produce a single exon microarray, which can be used for measuring human gene expression in a sample derived from human cervical epithelial cells. By measuring gene expression, the probes are therefore useful in grading and/or staging of diseases of the cervix, notably cervical cancer. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention relates to a single exon nucleic acid probe for measuring human gene expression in a sample derived from human foetal liver. The single exon nucleic acid probes may be used for predicting, measuring and displaying gene expression in samples derived from human fetal liver. The present sequence is a peptide encoded by a single exon nucleic acid probe of the invention. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human genome-derived single exon nucleic acid probes useful for analyzing gene expression in human fetal liver.
                                                                                                                                                                                                Gaps
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21-SEP-2000; 2000US-0234687P.
27-SEP-2000; 2000US-0236359P.
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Matches 5; Conservative 0; Mismatches 0; Indels 0; Gaps

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Search completed: August 31, 2006, 10:46:53
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Query Match Best Local Similarity 100.0%; Pred. No. 1.9; Matches 6; Conservative 0; Mismatches 0; Indels 0; Gaps 0;	a Matthews		Db 89 SWFLRN 94		PRSIT.T. 2	A12711	hypothetical protein Atu1098 [imported] - Agrobacterium tumefaciens (strain C58, Dupont)	C; Species: Agrobacterium tumefaciens	C;Date: 11-Jan-2002 #sequence_revision 11-Jan-2002 #text_change 09-Ju1-2004	C;Accession: AI2711	R; Wood, D.W.; Setubal, J.C.; Kaul, R.; Monks, D.; Chen, L.; Wood, G.E.; Chen, Y.; Woo, L.	erage, G.; Gillet, W.; Grant, C.; Guenthner, D.; Kutyavin, T.; Levy, R.; Li, M.; McCleilē	Karp, P.; Komero, P.; Zhang, S.	Science 294, 231/-2323, 2001	trans. 100, H.; 140, I.; Blaale, F.; Jung, M.; Alespan, W.; Felly, M.; Goldon-Manner,	NUCLI E.W.	Ailile: The Genome Or the Natural General Englineer Aginoaccerium cumeraciens Coo.	A; Reference number: AB25//; MOID: 21508550; PMID: 11/43193	A;Acceston: AIZ711	A;Status: preliminary	A;Modelle type: UNA	Ajrestudes: 1-10 - North Control of the April 10 - North Contr	A) LOBE-IELEGORGES: UNITAKUI:QUOGEGO; UNITAKKI:UFIUUUUULASS; GE:ABUUGGOGO; FIUN:AALIIIII.; A) EVARATIMENTAL GOINGES: OITERIO CERTAIN CARA (DIINGARI)	Principal Commences acceptances of the commences of the c	A:Gene: Atulo98	A, Map position: circular chromosome		55.68;	al Similarity 100.0%; Pred. No. 33;	MATCHES 5; CONSETVATIVE U; MISHMATCHES U; LINGELS U; GAPS U;	7. 3 currs 7		Db 8 SWFLR 12			RESULT 3	G97493	hypothetical protein AGR_C_2032 [imported] - Agrobacterium tumefaciens (strain C58, Cerec	C;Species: Agrobacterium tumefaciens	C;Date: 30-56P-2001 #sequence_revision 30-Sep-2001 #text_change 09-Jul-2004 .	R.Goodner, B.: Hinkle, G.: Gattung, S.: Miller, N.: Blanchard, M.: Ourollo, B.: Goldman,	A.: Liu, F.: Wollam, C.; Allinger, M.; Doughty, D.; Scott, C.; Lappas, C.; Markelz, B.;
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A.; Lut., E.; Marke, G.; Gattung, S.; Miller, N.; Blanchard, M.; Qurollo, B.; Goldman, Science 294, 2321-2328, 2001
A/Itle: Genome Sequence of the Plant Pathogen and Biotechnology Agent Agrobacterium tume A, Reference number: A97359; MUID:21608551; PMID:11743194
A, Accession: G97493
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A, Molecule type: DNA
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A, Cross references: UNIPROT:QSUGEO, UNIPARC:UPI00000D1A39; GB:AE007869; PIDN:AAK86904.1;
C, Genetics: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule type: A, Molecule t
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C; Species: Caenorhabditis elegans
C; Species: Caenorhabditis elegans
C; Date: 15-Oct.1999 #sequence_revision 15-Oct.1999 #text_change 15-Oct.1999
C; Accession: T20563
R; Bradshaw, H.; Stellyes, L.
R; Bradshaw, H.; Stellyes, L.
R; Bradshaw, H.; Stellyes, L.
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R; Bradshaw, H.; Stellyes, L.
R; Reference number: Z20641
A; Reference number: Z20641
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A; Status: preliminary; translated from GB/EMBL/DDBJ
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A; Status: preliminary; translated from GB/EMBL; U61944; PIDN:AAB03122.1; GSPDB:GN00022;
A; Canetics:
C; Genetics:
C; Genetics:
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A; Genetics:
A; Map position: 4
A; Introns: 63/3
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RESULT 4

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101 FLRNP 105
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A; Residues: 1-11 < SIM>A; Residues: 1-11 < SIM>A; Residues: 1-11 < SIM>A; Residues: 1-11 < SIM>A; Residues: 1-11 < SIM>A; Residues: 1-11 < SIM>A; Residues: University to the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of the type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of type of
Nypothetical protein 2 - Thiobacillus versutus (fragment)
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BB2830
hypothetical protein XF0247 [imported] - Xylella fastidiosa (strain 9a5c)
hypothetical protein XF0247 [imported] - Xylella fastidiosa (strain 9a5c)
C;Species: Xylella fastidiosa
C;Date: 18-Aug-2000
#sequence_revision 20-Aug-2000 #text_change 09-Jul-2004
C;Accession: BB2830
R;anonymous, The Xylella fastidiosa Consortium of the Organization for Nucleotide Sequen Nature 406, 151-157, 2000
A;Title: The genome sequence of the plant pathogen Xylella fastidiosa.
A;Reference number: AB2515; MUD:20365717; PMID:10910347
A;Note: for a complete list of authors see reference number A59328 below
A;Status: preliminary
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MHC sex-limited protein - mouse (fragment)
C;Species: Mus musculus (house mouse)
C;Date: 02-Aug-1996 #sequence_revision 02-Aug-1996 #text_change 16-Jul-1999
C;Accession: 169024
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Pred. No. 35;
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100.0%; Pred. No. ...
0; Mismatches
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33;
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Best Local Similarity 100.0%; Pred. No. 33;
Matches 5; Conservative 0; Mismatches
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Best Local Similarity 100.
Matches 5; Conservative
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A; Contents: annotation
C; Genetics:
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FLRNP 73
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37 FLRNP 41
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R;Nonaka, M.; Nakayama, K.; Yeul, Y.D.; Shimizu, A.; Takahashi, M.
Immunol. Rev. 87, 81-99, 1985
A;Title: Molecular cloning and characterization of complementary and genomic DNA clones 1
A;Reference number: 154567; MUID:86031969; PMID:2997024
                                                                                                                                                                                                                                                                             A;Residues: 1-128 <RES>
A;Cross-references: UNIPARC:UPI000011DE32; GB:M12974; NID:g199272; PIDN:AAA39560.1; PID:gCGenetics: 22/3; 86/3
A;Introns: 22/3; 86/3
C;Superfamily: alpha-2-macroglobulin
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C;Species: Arabidopsis thaliana (mouse-ear cress)
C;Date: 0.2-Feb--2001 #sequence_revision 02-Feb--2001 #text_change 09-Jul-2004
C;Accession: 024457
C;Accession: 024457
R;Lin, X.; Kaul, S.; Rounsley, S.D.; Shea, T.P.; Benito, M.I.; Town, C.D.; Fujii, C.Y.; N.M.; Koo, H.; Moffat, K.S.; Cronin, L.A.; Shen, M.; VanAken, S.E.; Umayam, L.; Tallon, L., Causs, D.; Nierman, W.C.; White, O.; Eisen, J.A.; Salzberg, S.L.; Fraser, C.M.; Venter, J. Nature 402, 761-768, 1999
A;Title: Sequence and analysis of chromosome 2 of the plant Arabidopsis thaliana.
A;Reference number: A84420; MUID:20083487; PMID:10617197
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A;Residues: 1-130 <STO>
A;Cross-references: UNIPROT:Q9SJC8; UNIPARC:UPI000009FB78; GB:AE002093; NID:g4587609; PII
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C;Species: Haemophilus influenzae
C;Species: Haemophilus influenzae
C;Species: Haemophilus influenzae
C;Accession: F64097
R;Fleischmann, R.D.; Adams, M.D.; White, O.; Clayton, R.A.; Kirkness, E.F.; Kerlavage, A.; Gocayne, J.D.; Scott, J.; Shirley, R.; Liu, L.I.; Glodek, A.; Kirkness, E.F.; Kerlavage, A.; Gocayne, J.D.; Scott, J.; Shirley, R.; Liu, L.I.; Glodek, A.; Kelley, J.M.; Weidman, J.D.; Brandon, R.C.; Fine, L.D.; Fritchman, J.L.; Fuhrmann, J.L.; Geoghagen, N.S.M.
Science 269, 496-512, 1995
A;Authors: Gnehm, C.L.; McDonald, L.A.; Small, K.V.; Fraser, C.M.; Smith, H.O.; Venter, A;Reference number: A64000; MUID:95350630; PMID:7542800
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A;Residues: 1-132 <TIGR>
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A;Start codon: GTG
C;Superfamily: fumarate reductase, subunit C (membrane anchor)
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A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
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Best Local Similarity 100.0%; Pred. No. 40;
Matches 5; Conservative 0; Mismatches
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Dypothetical protein SP1945 [imported] - Streptococcus pneumoniae (strain TIGR4)
C; Species: Streptococcus pneumoniae
C; Species: Streptococcus pneumoniae
C; Species: Streptococcus pneumoniae
C; Species: Streptococcus pneumoniae
C; Spaces Sion: D9227
R; Tettelin, H.; Nelson, K.E.; Paulsen, I.T.; Eisen, J.A.; Read, T.D.; Peterson, S.; Heide on, J.D.; Umayam, L.A.; White, O.; Salzberg, S.L.; Lewis, M.R.; Radune, D.; Holtzapple, I nson, T.; Hickey, E.K.; Holt, I.E.
Science 293, 498-506, 2001
A; Title: Complete Genome Sequence of a virulent isolate of Streptococcus pneumoniae.
A; Reference number: A5000; WUID:21357209; PMID:11463916
A; Status: D5227
A; Status: DAA
A; Status: DAA
A; Status: DAA
A; Status: DAA
A; Status: DAA
A; Status: DAA
A; Coses: Loftor Complete Genome Sequence of a virulent isolate of Streptococcus pneumoniae.
A; Status: DAA
A; Status: DAA
A; Status: DAA
A; Status: DAA
A; Coses: Leferences: UNIPROT:Q97NS2; UNIPROT:Q8CXA2; UNIPARC:UPI0000051A5E; GB:AB005672; I
A; Experimental source: strain TIGR4
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C; Genetics:
C; Genetics:
C; Gen
AMOJECUIE type: DNA
A;Residues: 1-187 <KUR>
A;Cross-references: UNIPROT:08YZF2; UNIPARC:UPI00000CDD92; GB:BA000019; PIDN:BAB72466.1;
A;Experimental source: strain PCC 7120
C;Genetics:
A;Gene: alr0508
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                                                                                                                                                                                            Length 187;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       55.6%; Score 5; DB 2;
100.0%; Pred. No. 55;
ive 0; Mismatches
                                                                                                                                                                                            55.6%; Score 5; DB 2; 100.0%; Pred. No. 54;
                                                                                                                                                                                                                                                 0; Mismatches
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C,Superfamily: tetracycline repressor
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les 5; Conservative
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Matches 5, Conserv
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Matches
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hypothetical protein alr0508 [imported] - Nostoc sp. (strain PCC 7120)
hypothetical protein alr0508 [imported] - Nostoc sp. (strain PCC 7120)
S,Species Nostoc sp. PCC 7120
A;Note: Nostoc sp. strain PCC 7120
C;Date: 14-Dec-2001 #sequence_revision 14-Dec-2001 #text_change 09-Jul-2004
C;Accession: AC1870
R;Kanneko, T.; Nakamura, Y.; Wolk, C.P.; Kuritz, T.; Sasamoto, S.; Watanabe, A.; Iriguchi Nakazaki, N.; Shimpo, S.; Sugimoto, M.; Takazawa, M.; Yamada, M.; Yasuda, M.; Tabata, B. 71tle: Complete Genomic Sequence of the Filamentous Nitrogen-fixing Cyanobacterium Ana A;Reference number: AB1807; WUID:21595285; PMID:11759840
                                                                                                                                                                                                                                                                                                 conserved hypothetical protein ylxS - Bacillus subtilis
C;Species: Bacillus subtilis
C;Species: Bacillus subtilis
C;Species: Bacillus subtilis
C;Accession: B36969; E69802; E31990
B;Shazand, K.; Tucker, J.; Grunberg-Manago, M.; Rabinowitz, J.C.; Leighton, T.
A;Shazand, K.; Tucker, J.; Grunberg-Manago, M.; Rabinowitz, J.C.; Leighton, T.
A;Title: Similar organization of the nusA-infB operon in Bacillus subtilis and Escherich
A;Reference number: A36905; MUID:93259931; PMID:8491709
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A;Cross-references: UNIPARC:UP1000060401; GB:Z99112; GB:AL009126; NID:g2633902; PIDN:CA
A;Experimental source: strain 168
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     Length 132,
                                                             0; Indels
        DB 2;
  55.6%; Score 5; DB 2
100.0%; Pred. No. 41;
iive 0; Mismatches
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                                                           5; Conservative
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     Query Match
Best Local Similarity
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A; Reference number: I53267; MUID: 94008724; PMID: 8404617
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Best Local Similarity 100.
Matches 5; Conservative
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Best Local Similarity 100.
Matches 5; Conservative
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                                                                                                                                                                                                                                                                                                                                                                  70 FLRNP 74
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A,Map position: 1
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C;Species: Macaca mulatta (rhesus macaque)
C;Date: 31-May-1996 #sequence_revision 31-May-1996 #text_change 09-Jul-2004
C;Accession: 167411
R;Golos, T.G.; Durning, M.; Fisher, J.M.; Fowler, P.D.
Endocrinology 133, 1744-1752, 1993
A;Title: Cloning of four growth hormone/chorionic somatomammotropin-related complementar
                                                                                                                                               Cipecies: Streptococcus pneumoniae
Cipate: 22-0ct-2001 #sequence_revision 22-0ct-2001 #text_change 09-Jul-2004
Cipate: 22-0ct-2001 #sequence_revision 22-0ct-2001 #text_change 09-Jul-2004
Cipate: 22-0ct-2001 #sequence_revision 22-0ct-2001 #text_change 09-Jul-2004
Cipate: 22-0ct-2001 #sequence_revision 22-0ct-2001 #text_change 09-Jul-2004
Cipate: 198091
R;Hoskins, J.A.; Alborn Jr., W.; Arnold, J.; Blaszczak, L.; Burgett, S.; DeHoff, B.S.; F. R.; LeBlanc, D.J.; Lee, L.N.; Lefkowitz, E.J.; Lu, J.; Matsushima, P.; McAhren, S.; N.; P.; Sun, P.M.; Winkler, M.S.
J. Bacteriol. 183, 5709-5717, 2001
A;Authors: Yang, Y.; Young-Bellido, M.; Zhao, G.; Zook, C.; Baltz, R.H.; Jaskunas, S.R.; A;Reference number: A97872; MuID:21429245; PMID:11544234
A;Accession: H98091
A;Accession: H98091
A;Residues: 1-206 <KURS
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A;Experimental source: strain Bristol N2; clone K07D4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A.Cross-references: UNIPROT:Q97NS2; UNIPROT:Q8CYA2; UNIPARC:UPI0000051A5E; GB.AE007317; C.Genetics:
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                                                                                                                          hypothetical protein spr1762 [imported] - Streptococcus pneumoniae (strain R6)
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.Date: 29-Oct-1999 #sequence_revision 29-Oct-1999 #text_change 31-Dec-2004
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submitted to the EMBL Data Library, July 1998
A.Description: The sequence of C. elegans cosmid K07D4.
A.Reference number: Z21327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 14
T3331
T3331
Cyberical protein K07D4.5 - Caenorhabditis elegans C;Species: Caenorhabditis elegans C;Species: 29-Oct-1399 #sequence_revision 29-Oct-1399 #te C;Accession: T3331
R;Henkhaus, J.: Wohldmann, P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Accession: T33341
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-208 <HEN>
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100.0%; Pred. No. 59;
iive 0; Mismatches
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A;Map position: 2
A;Introns: 25/3; 68/1; 127/1; 160/2
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5; Conservative
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Matches 5; Conservative
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  153 FLRNP 157
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A, Accession: 167411
A, Status: preliminary: translated from GB/EMBL/DDBJ
A, Molecule type: mRNA
A, Molecule type: mRNA
A, Residues: 1-217 (RES>
A, Cross-references: UNIPROT: Q07370; UNIPARC: UPI000016C489; GB: L16555; NID: g293116; PIDN: C; Superfamily: prolactin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Directin W05H12.1 [imported] - Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Accession: A87990
R;anonymous, The C. elegans Sequencing Consortium.
Science 282, 2012-2018, 1998
A;Title: Genome sequence of the nematode C. elegans: a platform for investigating biology A;Reference number: A75000; MUID:99069613; PMID:9851916
A;Note: see websites genome.wustl.edu/gsc/C_elegans/ and www_sanger.ac.uk/Projects/C_elegans/A;Note: published errata appeared in Science 283, 35, 1999; Science 283, 2103, 1999; and
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R;Klenk, H.B.; Clayton, R.A.; Tomb, J.F.; White, O.; Nelson, K.E.; Ketchum, K.A.; Dodson, F:Fleischmann, R.D.; Quackenbush, J.; Lee, N.H.; Sutton, G.G.; Gill, S.; Kirkness, E.F., Glodek, A.; Zhou, L.; Overbeek, R.; Gocayne, J.D.; Weidman, J.F.; McDonald, L. Nature 390, 364-370, 1997
A;Authors: Utterback, T.; Cotton, M.D.; Spriggs, T.; Artiach, P.; Kaine, B.P.; Sykes, S.N. Smith, H.O.; Woese, C.R.; Venter, J.C.
Smith, H.O.; Woese, C.R.; Venter, J.C.
A;Attle: The complete genome sequence of the hyperthermophilic, sulfate-reducing archaeor A;Reference number: A69250; MUID:98049343; PMID:9389475
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A;Crose-references: UNIPROT:028756; UNIPARC:UPI0000056CBB; GB:AE000997; GB:AE000782; NID:
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A;Status: preliminary; nucleic acid sequence not shown; translation not shown A;Molecule type: DNA
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C;Date: 05-Dec-1997 #sequence_revision 05-Dec-1997 #text_change 09-Jul-2004
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100.0%; Pred. No. 62;
iive 0; Mismatches
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100.0%; Pred. No. 62;
ive 0; Mismatches
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CjAccession: D84004
R;Takami, H.; Nakasone, K.; Takaki, Y.; Maeno, G.; Sasaki, R.; Masui, N.; Fuji, F.; Hiran
Nucleic Acids Res. 28, 4317-4331, 2000
A;Title: Complete genome sequence of the alkaliphilic bacterium Bacillus halodurans and c
A;Reference number: A83650; MUID:20512582; PMID:11058132
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Cispecies: Arabidopsis thaliana (mouse-ear cress)
Cispecies: Arabidopsis thaliana (mouse-ear cress)
Cispecies: Data-2001 #sequence_revision 02-Mar-2001 #text_change 09-Jul-2004
Ritheologis, A.; Ecker, J.R.; Palm, C.J.; Federspiel, N.A.; Kaul, S.; White, O.; Alonso, Chin, C.W.; Chung, M.K.; Conn, L.; Conway, A.B.; Conway, A.R.; Creasy, T.H.; Dewar, K.; Anthors: Hunter, J.L.; Hughes, B.; Huizar, L.
A.Authors: Hunter, J.L.; Jenkins, J.; Johnson-Hopson, C.; Khan, S.; Khaykin, E.; Kim, C.C.A.; Li, J.H.; Li, Y.; Lin, X.; Liu, S.X.; Liu, Z.A.; Luros, J.S.; Maiti, R.; Marziali, R.; A., Rooney, T.; Rowley, D.; Sakano, H.
A.Authors: Salzberg, S.L.; Schwartz, J.R.; Shinn, P.; Southwick, A.M.; Sun, H.; Tallon, I A., Roberson umber: Asily M. D.; Yu, G.; Fraser, C.M.; Venter, J.C.; Davis, R.W.
A,Title: Sequence and analysis of chromosome I of the plant Arabidopsis.
A,Reference number: Assilu; Muldisloid Pleini Parabidopsis.
                                                                                                                                          A;Cross-references: UNIPROT:Q9KBT7; UNIPARC:UPI00000C3CF8; GB:AP001513; GB:BA000004; NID: A;Experimental source: strain C-125
C;Genetics:
A;Gene: BH1837
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C;Genetics:
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C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C;Species: Bacillus halodurans _
C;Date: 01-Dec-2000 #sequence_revision 01-Dec-2000 #text_change 09-Jul-2004
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A; Reference number: A83650; MUID: 20512582; PMID: 11058132
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                                                                                                                                                                                                                                                                                     DB 2
66;
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Best Local Similarity 100.0%; Pred. No. 66;
Matches 5; Conservative 0; Mismatches
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Best Local Similarity 100.
Matches 5; Conservative
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A.Molecule type: DNA
A.Residues: 1-244 <STO>
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                                                                                                                     1-236 <STO>
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14 ESWFL 18
                                                                                                                                                                                                                                                                                                                                                                                                                       2 ESWFL 6
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A,Molecule type: DNA
A,Residues: 1-239 <STC
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                                                             A, Status: preliminary
A, Molecule type: DNA
                                 A; Accession: E83879
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CiSpecies: Nostco ep. PCC 7120
CiSpecies: Nostco ep. PCC 7120
CiDate: 14-Dec-2001 #sequence_revision 14-Dec-2001 #text_change 09-Jul-2004
CiAccession: AE2003
RiKaneko, T.; Nakamura, Y.; Wolk, C.P.; Kuritz, T.; Sasamoto, S.; Natanabe, A.; Irriguchi Nakazaki, N.; Shimpo, S.; Sugimoto, M.; Takazawa, M.; Yamada, M.; Yasuda, M.; Tabata, S DNA Res. 8, 205-213, 2001
A.Title: Complete Genomic Sequence of the Filamentous Nitrogen-fixing Cyanobacterium Analyteference number: AB1807; MUID:21595285; PMID:11759840
A.; Residues: Preliminary
A.; Residues: L-22 ckurs
A.; Residues: L-22 ckurs
A.; Residues: L-22 ckurs
A.; Cross-references: UNIPROT:QSYWN6; UNIPARC:UPI00000CE135; GB:BA000019; PIDN:BAB77945.1;
A.; Cross-references: strain PCC 7120
C; Genetics:
A.; Gene: alr1579
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Science 28, 1571-1577, 1999 A; Fraser, C.M.
A; Reference number: A75250; MUID:20036896; PMID:10567266
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Nucleic Acids Res. 28, 4317-4331, 2000
A;Title: Complete genome sequence of the alkaliphilic bacterium Bacillus halodurans and
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A;Experimental source: strain R1
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hypochetical protein BH1837 [imported] - Bacillus halodurans (strain C-125) C;Species: Bacillus halodurans
C;Date: 01-Dec-2000 #sequence_revision 01-Dec-2000 #text_change 09-Jul-2004
C;Accession: E83879
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100.0%; Pred. No. 65;
ive 0; Mismatches
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Best Local Similarity 100.
Matches 5; Conservative
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Matches 5; Conservative
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A;Title: Molecular characterization of porcine reproductive and respiratory syndrome vir A;Reference number: A45392; MUID:93174942; PMID:8438574
A;Accession: C45392
A;Status: preliminary
A;Molecule type: genomic RNA
A;Residues: 1-265 <CON>
A;Residues: 1-265 <CON>
CON>
C;Superfamily: uncharacterized conserved protein
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C;Date: 17-Feb-1994 #sequence_revision 17-Feb-1994 #text_change 05-Oct-2004
C;Accession: D36861
R;Meulenberg, J.J.; Hulst, M.M.; de Meijer, B.J.; Moonen, P.L.; den Besten, A.; de Kluyve
Bubmitted to GenBank, February 1993
A;Reference number: A36861
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R;Meulenberg, J.J.; Hulst, M.M.; de Meijer, E.J.; Moonen, P.L.; den Besten, A.; de Kluyve
R;Meulenberg, J.J.; Hulst, M.M.; de Meijer, E.J.; Moonen, P.L.; den Besten, A.; de Kluyve
A;Title: Lelystad virus, the causative agent of porcine epidemic abortion and respiratory
A;Reference number: A44281; MUID:93297139; PMID:8517032
A;Contents: annotation
A;Note: no sequence in this paper
C;Superfamily: uncharacterized conserved protein
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R,Miyata, M.; Sano, K.I.; Okada, R.; Fukumura, T.
Nuclèic Acids Res. 21, 4816-4823, 1993
A;Title: Mapping of replication initiation site in Mycoplasma capricolum genome by two-di
A;Reference number: S42116; MUID:94051609; PMID:8233831
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A;Molecule type: DNA
A;Residues: 1-279 <MIY>
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C;Species: Mycoplasma capricolum
C;Date: 27-Jan-1995 #sequence_revision 27-Jan-1995 #text_change 09-Jul-2004
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                                                                                                                                                                                                                                                                                       DB 2;
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                                                                                                                                                                                                                                                                                       55.6%; Score 5; DB 2
100.0%; Pred. No. 73;
tive 0; Mismatches
                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 100.0
Matches 5; Conservative
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A,Molecule type: genomic RNA
A,Residues: 1-265 <MEU>
                        Virology 193, 329-339, 1993
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Best Local Similarity
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D36861
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                                                                                                                                                                                                                                                                                                     hypothetical protein PA1350 [imported] - Pseudomonas aeruginosa (strain PA01)
C;Species: Pseudomonas aeruginosa
C;Date: 15-Sep-2000 #sequence_revision 15-Sep-2000 #text_change 09-Jul-2004
C;Accession: F83477
R;Stover, C.K.; Pham, X.Q.; Erwin, A.L.; Mizoguchi, S.D.; Warrener, P.; Hickey, M.J.; Br Rstover, Y.; Brody, L.L.; Coulter, S.N.; Folger, K.R.; Kas, A.; Larbig, K.; Lim, Alory, S.; Olson, M.V.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A/Title: Complete genome sequence of Pseudomonas aeruginosa PA01, an opportunistic pathor A;Reference number: A82950; MUID:20437337; PMID:10984043
A;Accession: F83477
A;Status: preliminary
A;Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cispecies: Paracoccus denirificans
Cispecies: Paracoccus denirificans
Cipate:: 28-Oct-1996 #sequence_revision 13-Mar-1997 #text_change 09-Jul-2004
Cipate:: 28-Oct-1996 #sequence_revision 13-Mar-1997 #text_change 09-Jul-2004
Cipate:: 28-Oct-1996 #sequence_revision 13-Mar-1997 #text_change 09-Jul-2004
Cipate:: 28-Oct-1996 #sequence_revision 13-Mar-1997 #text_change 09-Jul-2004
Cipate:: 38-Oct-1996 #sequence_revision 13-Mar-1997 #text_change 09-Jul-2004
Cipate:: 38-Oct-1996 #sequence_revision 13-Mar-1997 #text_change 09-Jul-2004
A)Reference number: 865958 #MUD:95324575; PMID:7601147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Cross-references: UNIPROT:Q913Z4; UNIPARC:UP100000C532D; GB:AE004564; GB:AE004091; NID
A;Experimental source: strain PAO1
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Cross-references: UNIPROT:P22566; UNIPARC:UP1000016FD2A; EMBL:U15028; NID:g595839; PID
C;Genetics:
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                                                                          Gaps
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                      Length 244;
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5. 71;
                   Score 5; DB 2;
Pred. No. 68;
55.6%; Scorio 100.0%; Pred. No. vo. o. o. Mismatches
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100.0%; Pred. No. 71;
live 0; Mismatches
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             Query Match 55.6
Best Local Similarity 100.
Matches 5; Conservative
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Best Local Similarity 100.
Matches 5; Conservative
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Best Local Similarity 100.
Matches 5; Conservative
                                                                                                                                                                           126 FLRNP 130
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A;Molecule type: DNA
A;Residues: 1-257 <VAN>
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S65958
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5, Conservative
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C,Superfamily: gntR protein
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Matches 5; Conserv
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                                                                                                                                                                                           hypothetical protein all2989 [imported] - Nostoc sp. (strain PCC 7120)
C;Species: Nostoc sp. PCC 7120
A,Note: Nostoc sp. strain PCC 7120
A,Note: Nostoc sp. strain PCC 7120
A,Note: 14-Dec-2001 #sequence_revision 14-Dec-2001 #text_change 09-Unl-2004
C;Accession: AF2179
R;Kaneko, T.; Nakamura, Y.; Wolk, C.P.; Kuritz, T.; Sasamoto, S.; Watanabe, A.; Iriguchi Nakazaki, N.; Shimpo, S.; Sugimoto, M.; Takazawa, M.; Yamada, M.; Yasuda, M.; Tabata, S DNA Res. 2.05-213, 2001
A;Rtle: Complete Genomic Sequence of the Filamentous Nitrogen-fixing Cyanobacterium Ana A;Reference number: AB1807; MUD:21595285; PMID:11759840
A;Status: preliminary
A;Mesidues: 1-282 <KUR>A;Residues: 1-282 <KUR>A;Residues: 1-282 <KUR>A;Residues: 1-282 <KUR>A;Residues: 1-282 <KUR>A;Residues: 1-282 <KUR>A;Residues: 1-282 <KUR>A;Residues: 1-282 <KUR>A;Residues: 1-282 <KUR>A;Residues: 1-282 <KUR>A;Residues: 1-282 <KUR>A;Residues: 1-282 <KUR>A;Residues: 1-282 <KUR>A;Residues: 1-282 <KUR>A;Residues: 1-282 <KUR>A;Residues: 1-282 <KUR>A;Residues: 1-282 <KUR>A;Residues: 1-282 <KUR>A;Residues: 1-282 <KUR>A;Residues: 1-282 <KUR>A;Residues: 1-282 <KUR>A;Residues: 1-282 <KUR>A;Residues: 1-282 <KUR>A;Residues: 1-282 <KUR>A;Residues: 1-282 <KUR>A;Residues: 1-282 <KUR>A;Residues: 1-282 <KUR>A;Residues: 1-282 <KUR>A;Residues: 1-282 <KUR>A;Residues: 1-282 <KUR>A;Residues: 1-282 <KUR>A;Residues: 1-282 <KUR
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C;Species: Escherichia coli
C;Opte: 12-Sep-1997 #sequence_revision 17-Sep-1997 #text_change 09-Jul-2004
C;Accession: A65140
R;Blattner, F.R.; Plunkett III, G.; Bloch, C.A.; Perna, N.T.; Burland, V.; Riley, M.; Cd
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A;Molecule type: DNA
A;Residues: 1-308 <PAU>
A;Essidues: 1-308 <PAU>
A;Cross-references: UNIPROT:Q94277; UNIPARC:UP1000007D331; EMBL:U64854; PIDN:AAB18314.1;
A;Experimental source: strain Bristol N2; clone K11C4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Cross-references: UNIPROT.O8YSU3; UNIPARC:UPI00000CE61F; GB:BA000019; PIDN:BAB74688.1; C;Genetics:
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Cispedies: Caenorhabditis elegans
Cispedies: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 09-Jul-2004
Ciscossion: T29142
Submitted to the EMBL Data Library, July 1996
Alpescription: The sequence of C. elegans cosmid K11C4.
A; Reference number: 220577
A; Accession: T29142
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A;Introns: 56/3; 81/1; 212/2; 265/2
C;Superfamily: Kinase-related transforming protein; protein kinase homology
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100.0%; Pred. No. 83;
iive 0; Mismatches
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Best Local Similarity 100.0%; Pred. No. 77;
Matches 5; Conservative 0; Mismatches
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Best Local Similarity 100.
Matches 5; Conservative
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                                                          ESWFL 91
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ESWFL 6
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Science 277, 1453-1462, 1997
Science 277, 1453-1462, 1997
A/Fittle: The complete genome sequence of Escherichia coli K-12.
A/Fittle: The complete genome sequence of Escherichia coli K-12.
A/Reference number: A64720; MUID:97426617; PMID:9278503
A/Recession: A65140
A/Status: preliminary; nucleic acid sequence not shown; translation not shown
A/Rolecule type: DNA
A/Residues: 1-313 <BLAT>
A/Residues: 1-313 <BLAT>
A/Residues: UNIPROT:P46860; UNIPARC:UPIO0001681BC; GB:AE000420; GB:U00096; NID:93
A/Reperimental source: strain K-12, substrain MG1655
C/Genetics:
A/Gene: gntR
C/Superfamily: gntR protein
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A;Molecule type: DNA
A;Residues: 1-321 <STO>
A;Cross-references: UNIPROT:Q8X6V8; UNIPARC:UPI0000165962; GB:AE005174; NID:g12518088; PJ
A;Experimental source: strain O157:H7, substrain EDL933
C;Genetics:
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NyAlternate names: hypothetical protein slr0056
C;Species: Synechocystis sp.
A;Variety: PCC 6803
A;Variety: PCC 6803
A;Variety: PCC 6803
A;Variety: PC 6803
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A;Residues: 1-324 <KAN>
A;Cross-references: UNIPROT:Q55145; UNIPARC:UPI00000347CC; EMBL:D64001; GB:AB001339; NID:
A;Nore: the nucleotide sequence was submitted to the EMBL Data Library, June 1996
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C,Species: Escherichia coli
C,Date: 16-Feb-2001 #sequence_revision 16-Feb-2001 #text_change 09-Jul-2004
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R;Perna, N.T.; Plunkett III, G.; Burland, V.; Mau, B.; Glasner, J.D.; Rose, D.J.; Mayhew, iller, L.; Grotbeck, E.J.; Davis, N.W.; Lim, A.; Dimalanta, E.; Potamousis, K.; Apodaca, Nature 409, 529-533, 2001
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A;Accession: G86010
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A,Status: nucleic acid seguence not shown; translation not shown
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100.0%; Pred. No. 86;
tive 0; Mismatches
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100.0%; Pred. No. 84;
tive 0; Mismatches
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substrain R1
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R;Hayashi, T.; Makino, K.; Ohnishi, M.; Kurokawa, K.; Ishii, K.; Yokoyama, K.; Han, C.G.,
gasawara, N.; Yasunaga, T.; Kuhara, S.; Shiba, T.; Hattori, M.; Shinagawa, H.
DNA Res. 8, 11-22, 2001
A;Title: Complete genome sequence of enterohemorrhagic Escherichia coli 0157:H7 and genom
A;Reference number: A99629; MUID:21156231; PMID:11258796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-311 «HAY»
A;Cross-references: UNIPROT:08X6V8; UNIPARC:UPI000000E6E3; GB:BA000007; PIDN:BAB37710.1;
A;Experimental source: strain O157:H7, substrain RIMD 0509952
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CiDate: 13-Aug-1999 #sequence_revision 13-Aug-1999 #text_change 09-Jul-2004
CiDate: 13-Aug-1999 #sequence_revision 13-Aug-1999 #text_change 09-Jul-2004
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C;Date: 18-Jul-2001 #sequence_revision 18-Jul-2001 #text_change 09-Jul-2004
C;Accession: D15154
R;Hayashi, T.; Makino, K.; Ohnishi, M.; Kurokawa, K.; Ishii, K.; Yokoyama, K.; Han, C.G.;
Gasawara, N.; Yasunaga, T.; Kuhara, S.; Shiba, T.; Hattori, M.; Shinagawa, H.
NNA Res. 8, 11-22, 2001
A;Fille: Complete genome sequence of enterohemorrhagic Escherichia coli 0157:H7 and genor
A;Reference number: A99629; MUID:21156211; PMID:11258796
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                                                                                                                            regulator of gluconate operon (imported) - Escherichia coli (strain O157:H7, C;Species: Escherichia coli
C;Date: 18-Jul-2001 #sequence_revision 18-Jul-2001 #text_change 09-Jul-2004
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.88;
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100.0%; Pred. No. 90;
ive 0; Mismatches
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nes 5; Conservative 0
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C,Superfamily: gntR protein
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Matches 5; Conserv
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A;Molecule type: DNA
A;Residues: 1-340 <HAY>
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AB0995
gluconate utilization operon repressor [imported] - Salmonella enterica subsp. enterica
C;Species: Salmonella enterica subsp. enterica serovar Typhi
A;Note: this species has also been called Salmonella typhi
C;Becsion: Ab0995
C;Accession: Ab0995
R;Parkhill, J; Dougan, G; James, K.D; Thomson, N.R; Pickard, D; Wain, J; Churcher,
th, T; Connerton, P; Cronin, A; Davis, P; Davies, R.M; Dowd, L; White, N; Farrar,
S; Moule, S; O'Gaora, P.
Nature 413, 848-852, 2001
A;Authors: Parry, C; Quali, M; Rutherford, K; Simmonds, M; Skelton, J; Stevens, K;
A;Itle: Complete genome sequence of a multiple drug resistant Salmonella enterica serov
A;Reference number: AB0502; MUID:21534947; PMID:11677608
A;Accession: AB0995
A;Accausi preliminary
A;Molecule type: DNA
A;Residues: 1931 cPARA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        near Shock protein b - nellcobacter pylori (strain 2002), (Species: Helicobacter pylori) (species: Helicobacter pylori) (Species: 109-Aug-1997 #text_change 05-Oct-2004), (Species: 109-Aug-1997 #text_change 05-Oct-2004), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Species: 1864524), (Speci
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C,Genetics:
A,Gene: G4
C,Superfamily: Methanococcus jannaschii conserved hypothetical protein MJ0279
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H64554
heat shock protein B - Helicobacter pylori (strain 26695)
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100.0%; Pred. No. 88;
tive 0; Mismatches
                                                                                                                                                                  55.6%; Score 5; DB 2;
100.0%; Pred. No. 87;
iive 0; Mismatches
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100.0%; Pred. No. 88;
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A,Gene: STY4268
C,Superfamily: gntR protein
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289 FLRNP 293
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SWFLR 53
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Search completed: August 31, 2006, 10:48:01 Job time : 21.25 secs
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A;Map position: 1
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C;Date: 12-Sep-1997 #sequence_revision 17-Sep-1997 #text_change 09-Jul-2004
C;Accession: D65129
R;Blattner, F.R.; Plunkett III, G.; Bloch, C.A.; Perna, N.T.; Burland, V.; Riley, M.; CC
A.; Rose, D.J.; Mau, B.; Shao, Y.
Science 277, 1453-1462, 1997
A;Title: The complete genome sequence of Escherichia coli K-12.
A;Reference number: A64720; MUID:97426617; PMID:9278503
A;Accession: D65129
A;Status: preliminary; nucleic acid sequence not shown; translation not shown
A;Molecule type: DNA
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A,Residues: 1-340 <BLAT>
A,Cross-references: UNIPROT:P45524; UNIPARC:UP1000013B219; GB:AE000411, GB:U00096; NID:9
A,Experimental source: strain K-12, substrain MG1655
C,Gene: yher
A,Gene: yher
C,Superfamily: alpha/beta hydrolase, YheT type
A;Cross-references: UNIPROT:Q8X873; UNIPARC:UPI000000989; GB:BA000007; PIDN:BAB37627.1;
A;Experimental source: strain O157:H7, substrain RIMD 0509952
Genetics:
A;Genetics:
C;Superfamily: alpha/beta hydrolase, YheT type
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A;Molecule type: DNA
A;Molecule type: DNA
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A;Rosidues: 1-340 <STO>
A;Rosidues: 1-340 <STO>
A;Cross-references: UNIPROT:Q8X873; UNIPARC:UPI000000989; GB:AE005174; NID:g12517975;
A;Experimental source: strain O157:H7, substrain EDL933
C;Genetics:
A;Gene: yheT
A;Gene: yheT
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D65129
hypothetical 38.5 kD protein in kifb-prkb intergenic region - Bscherichia coli (strain
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illarity 100.0%; Pred. No. 90;
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ative 0; Mismatches
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Similarity 100.0%; Pred. No. 90;
5; Conservative 0; Mismatches
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Q3u251 mus musculu Q9dlu9 mus musculu Q3zif4 phasmahyla Q9sjCB arabidopsis P44B92 haemophilus Q3qpml silicibacte	Q4qm67 haemophilus Q89a50 buchnera ap Q89a60 uncultured Q3heu6 trichodesmi		Q48hm6 pseudomonas P32726 bacillus su Q388g6 trypanosoma	Q62uz0 bacillus li Q7vy38 bordetella	bordetella bordetella bacillus c	Q65jis bacillus li Q427f6 desulfitoba Q58dg8 bos taurus	Q43rj4 solibacter Q5sjn7 thermus the	Q72kll thermus the Q37xb6 novosphingo Q4ctl0 trypanosoma O4dom4 trypanosoma		Q4sv42 tetraodon n Q4c776 crocosphaer Q9sINB streptomyce		Q3gc31 syntrophomo Q3xxx0 magnetococc Q7psel anopheles q			Q2ncp9 erythrobact Q4tep6 tetraodon n Q5upc5 mimivirus.		097ns2 streptococc Q4b3c0 polaromonas O2p521 xanthomonas		Q8p6jl xanthomonas Q8pj91 xanthomonas		alouatta s macaca ass	Q4vulb macaca assa Q8mi74 callithrix O8wnd9 ateles qeof	hahella archaeog	homo sapi inverside
5 55.6 122 2 Q3U251_MOUSE 5 55.6 127 .2 Q9D1U9 MOUSE 5 55.6 128 2 Q3ZIF4_9NEOB 5 55.6 130 2 Q9SJC98_ARATH 5 55.6 132 1 FRDC_HĀEIN 5 55.6 134 2 Q3QPMI 9RHOB	5 55.6 136 2 5 55.6 137 1 5 55.6 138 2 5 55.6 139 2	5 55.6 142 2 5 55.6 142 2 5 55.6 142 2 5 55.6 143 2	5 55.6 149 2 5 55.6 156 1 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	5 55.6 157 2 5 55.6 159 2	5 55.6 159 2 5 55.6 159 2 5 55.6 165 2	5 55.6 166 2 5 55.6 167 2 5 55.6 177 2 5 55.6 172 2	5 55.6 172 2 5 55.6 173 2	5 55.6 175 2 5 55.6 177 2 5 55.6 180 2 5 55.6 180 2	5 55.6 181 5 55.6 186 5 55.6 187 5 55.6 189	5 55.6 189 2 5 55.6 190 2 5 55.6 190 2 7 75.6 190 2	5 55.6 191 2 5 55.6 191 2 5 55.6 192 2	5 55.6 194 2 5 55.6 194 2 5 55.6 195 2	5 55.6 197 2 5 55.6 197 2 5 55.6 197 2	5 55.6 198 2	5 55.6 199 2 5 55.6 200 2 5 55.6 201 2	5 55.6 203 2 5 55.6 206 2	5 55.6 206 2 5 55.6 207 2 5 55.6 212 2	5 55.6 213 2 5 55.6 213 2	5 55.6 213 2 5 55.6 213 2	5 55.6 214 2 5 55.6 217 1	5 55.6 217 2 5 55.6 217 2	5 55.6 217 5 55.6 217 5 55.6 217	5 55.6 217 2 5 55.6 219 1	5 55.6 220 2 Q5JP
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GenCore version 5.1.9 Copyright (c) 1993 - 2006 Biocceleration Ltd - protein search, using sw model	August 31, 2006, 10:29:54; Search time 139.25 (without alignments) 59.786 Million cell	DENGUE_SEROTYPE4 e: 9 1 veswflrnp 9	e: OLIGO Gapop 60.0 , Gapext 60.0	2849598 seqs, 925015592 residues	ı of hits satisfying chosen parameters: 2	length: 0 Length: 2000000000	ssing: Listing first 150 summaries	<pre>UniProt_7.2:* 1: uniprot_sprot:* 2: uniprot_trembl:*</pre>	No. grea	SUMMARIES * Onerv	re Match Length DB ID	66.7 216 2 66.7 238 2 66.7 272 2	272 275 365	66.7. 407 2	55.6 55.2 55.6 70.2	55.6 73 2 55.6 73 2	55.6 78 55.6 86	55.6 90 2 55.6 102 2	55.6 106	55.6 111 2	55.6 120 2	55.6 120 2 55.6 120 2 55.6 120 2	55.6 120 2 55.6 122 2	55.6 122 2 Q45DC8 ⁻ 55.6 122 2 Q4LWW9 ⁻
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DOI=10.1046/j.1462-2920.2002.00366.x;

Nelson K.E., Weinel C., Paulsen I.T., Dodson R.J., Hilbert H.,
Martins dos Santos V.A.P., Fouts D.E., Gill S.K., Pop M., Holmes M.,
Brinkac L.M., Beanan M.J., DeBoy R.T., Daugherty S.C., Kolonay J.F.,
Madupu R., Nelson W.C., White O., Peterson J.D., Khouri H.M.,
Hance I., Chris Lee P., Holtzapple E.K., Scanlan D., Tran K.,
Moazzez A., Utterback T.R., Rizzo M., Lee K., Kosack D., Moestl D.,
Wedler H., Lauber J., Stjepandic D., Hoheisel J., Straetz M., Heim S.,
Kiewitz C., Eisen J.A., Timmis K.N., Duesterhoeft A., Tuemmler B.,
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Bacteria; Spirochaetes; Spirochaetales; Leptospiraceae; Leptospira.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pseudomonas putida (strain KT2440).
Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales;
Pseudomonadaceae; Pseudomonas.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Complete genome sequence and comparative analysis of the metabolically versatile Pseudomonas putida KT2440."; Environ. Microbiol. 4:799-808(2002).
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SEQUENCE 238 AA; 27089 MW; 39D2AEFGF2A22C02 CRC64;
                                                                       376CA381615C4F9F
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Q72TK1_LEPIC PRELIMINARY; PRT; 272 AA.
Q72TK1_L201U-2004, integrated into UniProtKB/TrEMBL.
05-JUL-2004, sequence version 1.
07-FEB-2006, entry version 9.
                                                                                                                                                                                                                                                                                                                                                                                  93_FSEPK PRELIMINARY; PRT; 238 AA. 088059. PSEPK PRELIMINARY; PRT; 238 AA. 088029; 01-JUM-2003, sequence version 1.01-JUM-2003, sequence version 1.47 FEB-2006, entry version 8. Hypothetical protein. OrderedLocusNames=PP_0659; 0xFNames=PP_0639;
                                                                                                                     DB 2;
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            EMBL, AY034092; AAK62520.1; -; Genomic_DNA Plasmid.
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089ymm6 032574 032257 055880 0 055880 0 055880 0 0558819 0 055825 0 055825 0 055825 0 055825 0 055825 0 055825 0 055825 0 055825 0 055825 0 055825 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 0 055848 
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NCBI_TaxID=161213;
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09K915_BACHD
04Y968_PLACH
04CNV0_TRYCR
036PY0_MARHY
02USY0_ASPOR
09C9H1_ARATH
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042M52 PSEBU2
09KBT7 BACHD
074160 LACJO
03BEU4 ACTSC
039XNZ GEOMG
                                           032257_DEHSC
0508614_PSESM
069MR9_ORYSA
038813_PTRYP
055C26_SCHJA
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025C36_SCHJA
025C36_SCHJA
035CHJ2_SCHJA
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07-FEB-2006, entry version 9.
Putative proteophosphoglycan.
Micrococcus sp. 28.
Plasmid pSD10.
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00VPM7 9NICC
00VPM7 9NICC
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01 MAR-20
01 MAR-20
01 OT-PEB-20
02 PLEATIVE
03 MICTOCOCO
03 PLEATIVE
04 MILLEOTI
05 MICLEOTI
06 STANIN-2
07 NUCLEOTI
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PubMedia-1671304; DOI=10.1126/science.1088727;

Methe B.A., Nelson K.E., Essen J.A., Paulsen I.T., Nelson W.C., Heidelberg J.F., Wu D., Wu M., Ward N.L., Beanan M.J., Dodson R.J., Madupu R., Brinkac L.M., Daugherty S.C., DeBOY R.T., Durkin A.S., Gwinn M.L., Kolonay J.F., Sullivan S.A., Haft D.H., Selengut J., Davidsen T.M., Zafar N., White O., Tran B., Romero C., Forberger H.A. Weidman J.F., Khouri H.M., Feldblyum T.V., Utterback T.R., Van Aken S.E., Lovley D.R., Fraser C.M.; Rollone of Geobacter sulfurreducens: metal reduction in subsurface
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OrderedLocusNames=GSU3451;
Geobacter sulfurreducens.
Bacteria; Proteobacteria; Deltaproteobacteria; Desulfuromonadales;
Geobacteraceae; Geobacter.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         66.7%; Score 6; DB 2; Length 275; 100.0%; Pred. No. 59; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                      Length 272;
                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                              272 AA; 32746 MW; E6C5F7330BB410B3 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GO, GO:0016787; F:hydrolase activity; IEA.
InterPro; IPR000379; Ser_estrs.
Complete proteome: Hydrolase; Hypothetical protein.
SEQUENCE 275 AA; 30210 MW; B5A972E003C99EEB CRC64;
                                                                                                                                                                                                                                                                                                           ;
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7021056-9DELT PRELIMINARY; 'PRT; 365 AA.

Q21056:

07-MAR-2006, integrated into UniProtKB/TrEMBL.

07-MAR-2006, sequence version 1.

07-MAR-2006, entry version 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   05-JUL-2004, integrated into UniProtKB/TrEMBL. 05-JUL-2004, sequence version 1. FEB-2006, entry version 12. Hypothetical protein.
                                                                                                                                                                                                                                             Query Match 66.7%; Score 6; DB 2; Best Local Similarity 100.0%; Pred. No. 59; Matches 6; Conservative 0; Mismatches
                              GO; GO:0003824; F:catalytic activity; IEA.
GO; GO:0008152; P:metabolism; IEA.
InterPro; IPR006087; Sterol_desat.
InterPro; IPR006088; Sterol_desatur.
Pfam; PF01598; Sterol_desatur.
Comple proteome.
SEQUENCE 272 AA; 32746 MW; E6C5F7330BB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; AE017180; AAR36841.1; -; Genomic_DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY; PRT;
           BioCyc; LINT189518:LA3077-MONOMER;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BioCyc; GSUL35554:GSU3451-MONOMER;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Science 302:1967-1969(2003).
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Matches 6; Conservative
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Q746R7 GEOSL
Q746R7;
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                                                                        TRAINEFOCCTUZ L1.130;

PubMed=15028702; DOI=10.1128/JB.186.7.2164-2172.2004;

Nascimento A.L.T.O., Ko A.I., Martins E.A.L., Monteiro-Vitorello C.B., Marcimento A.L.T.O., Ko A.I., Martins E.A.L., Monteiro-Vitorello C.B., Marques M.V., Oliveira M.C., Menck C.F.M., Leite L.C.C., Carrer H., Coutinho L.L., Degrave W.M., Dellagostin O.A., El-Dorry H., Coutinho L.L., Degrave W.M., Dellagostin O.A., El-Dorry H., Goes-Neco A., Goldman G.H., Goldman L.R., Gamberini M., Giglioti E.A., Jaronimo S.M. B., Junqueira-de-Azevedo I.L.M., Kimura E.T., Kuramae E.E., Lemos E.G.M., Lemos M.V.F., Narino C.L., Nunes L.R., A Goldwan M.S., Schriefer A., Sommer P., Tsai S.M., Simpson A.J.G., Ferro J.A., Camargo L.E.A., Kitajina J.P., Setubal J.C., Van Sluys M.A., Camargo L.E.A., Kitajina J.P., Setubal J.C., Van Sluys M.A., Camargo L.E.A., Kitajina J.P., Setubal J.C., Van Sluys M.A., Camargo L.E.A., Kitajina de J.P., Setubal J.C., Van Sluys M.A., Camargo L.E.A., Kitajina de J.P., Setubal J.C., Van Sluys M.A., Camargo L.E.A., Kitajina de J.P., Setubal J.C., Van Sluys M.A., Camparative genomics of two Leptospira interrogans serovars reveals in novel insights into physiology and pathogenesis.",
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms Distributed under the Creative Commons Attribution-NoDerivs License
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STRAIN=56601 / Serogroup Icterobaemorrhagiae / Serovar lai;
MEDLINE=22598143; PubMed=12712204; DOI=10.1038/nature01597;
Ren S.-X., Fu G., Jiang X.-G., Zeng R., Miao Y.-G., Xu H.,
Zhang Y.-X., Xiong H., Lu G., Lu L.-F., Jiang H.-Q., Jia J., Tu Y.-F.,
Jiang U.-X., Qu W.-Y., Zhang Y.-Q., Cai Z., Sheng H.-H., Yin H.-F.,
Zhang Y., Zhu G.-F., Wan M. Huang H.-L., Qian Z., Wang S.-Y., Ma W.,
Xao Z.-J., Shen Y., Qiang B.-Q., Xia Q.-C., Guo X.-K., Danchin A.,
Saint Girons I., Somerville R.L., Wen Y.-M., Shi M.-H., Chen Z.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 272;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  272 AA; 32759 MW; 49C5F6760BB406DF CRC64;
                                                       NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-MAR-2003, integrated into UniProtKB/TrEMBL. 01-MAR-2003, sequence version 1. 07-MAR-2006, entry version 13. 07-MAR-2006, entry version 13. 08-frol desaturase family protein. OrderedlocusNames=LA3078; ORFNames=LA_3078;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    66.7%; Score 6; DB 2;
100.0%; Pred. No. 59;
Live 0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; AE016823; AAS69627.1; -; Genomic DNA.
GO; GO:0003824; F:catalytic activity; TEA.
GO; GO:0008152; P:metabolism; IEA.
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GenomeReviews; AE010300_GR; LA3078.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro; IPR006087; Sterol desat.
InterPro; IPR006088; Sterol desatur.
Pfam; PF01598; Sterol desat; 1.
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Q8F1Q1;
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Matches 6; Conservative
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NCBI_TaxID=44275;
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InterPro; IPR011583; Chitinase II.
InterPro; IPR01223; Glyco hydro 18.
Pfam; PR00704; Glyco hydro 18; 1.
SEQUENCE A07 AA; 42455 MW; 871BC26EB7B856F8 CRC64;
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Q2R4T2;
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Query Match
Best Local Similarity 100.00
Best Local Similarity 100.00
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Best Local Similarity
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NCBI_TaxID=246194;
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Q3AB12_CA
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MEDLINE=22337377; PubMed=12447439; DOI=10.1038/nature01183;
Feng Q., Zhang Y., Hao P., Wang S., Fu G., Huang Y., Li Y., Zhu J.,
Liu Y., Hu X., Jia P., Zhang Y., Zhao Q., Ying K., Yu S., Tang Y.,
Weng Q., Zhang L., Lu Y., Mu J., Lu Y., Zhang L.S., Yu Z., Fan D.,
Liu X., Lu T., Li C., Wu Y., Sun T., Lei H., Li T., Hu H., Guan J.,
Wu X., Zhang R., Zhou B., Chen L., Jin Z., Wang R., Yin H.,
Cai Z., Ren S., Lu G., QW W., Zhu G., Tu Y., Jia J., Zhang Y.,
Chen J., Kang H., Chen X., Shao C., Sun Y., Hu Q., Zhang Y.,
Wang L., Ding C., Sheng H., Gu J., Chen S., Ni L., Zhu F., Chen W.,
Han B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Oryza sativa (japonica cultivar-group).
Bukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta,
Spermatophyta, Magnoliophyta, Liliopsida, Poales, Poaceae, BEP clade,
Ehrhartoideae, Oryzeae, Oryza.
                                                                                                                                                                                                                      US DOE Joint Genome Institute;

Copeland A., Lucas S., Lapidus A., Barry K., Detter J.C., Glavina T., Hammon N., Israni S., Pitluck S., Brettin T., Bruce D., Han C., Tapia R., Gilna P., Kise H., Schmutz J., Larimer F., Land M., Kyrpides N., Anderson I., Sanford R.A., Ritalahti K.M., Thomas H.S., Rirby J.R., Zhulin I.B., Loeffler F.E., Richardson P.;

"Complete sequence of Anacromyxobacter dehalogenans 2CP-C.", submitted (JAN-2006) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;
0
     Acyltransferase 3.
ORFNanses-Adeh 1161;
Anaeromyxobacter dehalogenans 2CP-C.
Banceria; Proteobacteria; Deltaproteobacteria; Myxococcales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 365;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  365 AA; 39837 MW; DF5D43FCDC9240D3 CRC64;
                                                                                               Cystobacterineae; Myxococcaceae; Anaeromyxobacter, NCBI_TaxID=290397;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gramens, Q7XMI7; -. Gramens, Q7XMI7; -. Gramens, Q7XMI7; -. GO; GO: 0004568; F: chitinase activity; IEA. GO; GO: 000575; P: carbohydrate metabolism; IEA. GO; GO: 0006032; P: chitin catabolism; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Sequence and analysis of rice chromosome 4."; Nature 420:316-320(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-0CT-2003, integrated into UniprotKB/TrEMBL.
01-MRA-2004, sequence version 2.
07-FEB-2006, entry version 11.
02/Bbb0006N15.12 protein.
Name=OSJNBb0006N15.12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             66.7%; Score 6; DB 2;
100.0%; Pred. No. 76;
iive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   407 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; CP000251; ABC80935.1; -; Genomic_DNA.
Acyltransferase; Transferase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; AL607003; CAE04595.2; -; Genomic_DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q7XMI7_ORYSA PRELIMINARY; PRT;
Q7XMI7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HSSP; Q13231; 1GUV.
                                                                                                                                                                           NUCLEOTIDE SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
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PubMed=16311624; DOI=10.1371/journal.pgen.001065;
Wu M., Ren Q., Durkin A.S., Daugherty S.C., Brinkac L.M., Dodson R.J.,
Madupu R., Sullivan S.A., Kolonay J.F., Nelson W.C., Tallon L.J.,
Jones K.M., Ulrich L.E., Gonzalez J.M., Zhulin I.B., Robb F.T.,
                                                                                                                                                                                                                                                                                                                                                                                                                               24-JAN-2006, integrated into UniProtKB/TrEMBL.
24-JAN-2006, sequence version 1.
24-JAN-2006, sequence version 1.
07-FBB-2006, entry version 2.
Glycosyl hydrolases family 18, putative.
ORFNames=LOC_OS11927400;
ORFNames=LOC_OS11927400;
ORFNames=LOC_OS11927400;
Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; BEP clade;
Ehrhartoideae; Oryzeae; Oryza.
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Bacteria; Firmicutes; Clostridia; Clostridiales; Peptococcaceae;
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22-NOV-2005, sequence version 1.
07-FEB-2006, entry version 3.
Molybdopterin oxidoreductase, molybdopterin-binding subunit.
OrderedLocusNames=CHY_1852;
                   Length 407;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 451;
                                                                               0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Buell C.R., Wing R.A., McCombie W.A., Ouyang S.;
Submitted (APR-2005) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 451 AA; 49352 MW; B57A86A9CB81737A CRC64;
66.7%; Score .,
100.0%; Pred. No. 84;
                DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 2;
                                                                                                                                                                                                                                                                                                                                                                          451 AA.
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100.0%; Pred. No. 92;
:ive 0; Mismatches
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GO; GO:0016787; F:hydrolase activity; IEA.
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preliminary data.
    Hypothetical protein.
                                                                                                                               NUCLEOTIDE SEQUENCE
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                                                                                      NCBI_TaxID=44689;
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                                     Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms Distributed under the Creative Commons Attribution-NoDerivs License
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PubMed=15637271; DOI=10.1126/Science.1103717;
Hall N., Karras M., Raine J.D., Carlton J.M., Kooij T.W.A.,
Berriman M., Florens L., Janssen C.S., Pain A., Churistophides G.K.,
James K., Rutherford K., Harris B., Churcher C.M.,
Quail M.A., Ormond D., Doggett J., Trueman H.E., Mendoza J.,
Bidwell S.L., Rajandream M.A., Carucci D.J., Yates J.R. III,
Kafatos F.C., Janse C.J., Barrell B.G., Turner C.M.R., Waters A.P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "A comprehensive survey of the Plasmodium life cycle by genomic,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAUTION: The sequence shown here is derived from an EMBL/GenBank/DDBJ whole genome shotgun (WGS) entry which is
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Eukaryota, Alveolata; Apicomplexa, Haemosporida, Plasmodium
                                                                                                                                                                                                                                                       66.7%; Score 6; DB 2; Length 1035; 100.0%; Pred. No. 1.9e+02; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                               1035 AA; 115121 MW; AA24A61217A94CEC CRC64;
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SEQUENCE 55 AA; 6761 MW; A74199959FC3FBBE CRC64;
                                                                                                                      TIGR; CHY 1852; -. GO; GO:0030151; F:molybdenum ion binding; IEA. GO; GO:0016491; F:oxidoreductase activity; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; CAAJ01006961; CAH84646.1; -; Genomic_DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  05-JUL-2005, integrated into UniprotKB/TrEMBL, 05-JUL-2005, sequence version 1. O7-FEB-2006, entry version 4. Oypochetical protein. OXFNames=PC402496.00.0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   integrated into UniProtKB/TrEMBL
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                                                                                                    EMBL; CP000141; ABB15360.1; -; Genomic_DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 transcriptomic, and proteomic analyses."; Science 307:82-86(2005).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
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Q4XEM2_PLACH· PRELIMINARY;
Q4XEM2;
  PLoS Genet. 1:563-574(2005).
                                                                                                                                                                                                                                                                                                 6; Conservative
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Matches 5; Conservative
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VESWFL 45
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Q54AN7 DIC
ID Q54AN
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A Steininger L., Pachebat J.A., Gloeckner G., Rajandream M.-A.,
RA Sucgang R., Berriman M., Song J., Olsen R., Szafranski K., Xu Q.,
RA Bankier A.T., Lehmann R., Hamlin N., Davies R., Gaudet P., Fey P.,
RA Bankier K., Chen G., Saunders D., Sodergren E., Davis P.,
RA Filcher K., Chen G., Saunders D., Sodergren E., Davis P.,
RA Kerhornou A., Nie X., Hall N., Anjard C., Hemphill L., Bason N.,
RA Farbrother P., Desany B., Just E., Morio T., Rost R., Churcher C.,
RA Muzny D., Mourier T., Pain A., Lu M., Harper D., Lindsay R.,
Hauser H., James K., Quiles M., Mohan M.B., Saito T., Buchrieser C.,
RA Mardroper A., Felder M., Mohan M.B., Saito T., Buchrieser C.,
RA Loulseged H., Mungall K., Oliver K., Price C., Quail M.A.,
RA Loulseged H., Mungall K., Oliver K., Price C., Quail M.A.,
RA Sugano S., White B., Walker D., Woodward J., Wainckler T., Tanaka Y.,
RA Shaulsky G., Schleicher M., Weinstock G., Rosenthal A., Cox E.C.,
RA Shaulsky G., Schleicher M., Weinstock G., Rosenthal A., Cox E.C.,
RH Williams J., Dear P.H., Noegel A.A., Barrell B., Kuspa A.;
RT "The genome of the social amoeba Dictyostelium discoideum.";
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Shinn P., Chen H., Cheuk R., Kim C.J., Koesema E., Meyers M.C.,
Banh J., Bowser L., Carninci P., Dale J.M., Goldsmith A.D.,
Hayashizaki Y., Ishida J., Jiang P.X., Jones T., Kamiya A.,
Karlin-Neumann G., Kawai J., Lam B., Lee J.M., Lin J., Liu S.X.,
Miranda M., Narusaka M., Nguyen M., Onodera C.S., Palm C.J.,
Pham P.K., Quach H.L., Sakurai T., Satou M., Seki M., Southwick A.,
Tang C.C., Toriumi M., Yamada K., Yamamura Y., Yu G., Yu S.,
Shinozaki K., Davis R.W., Theológis A., Ecker J.R.;
Submitted (SEP-2001) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta, Spermatophyta, Magnoliophyta, eudicotyledons, core eudicotyledons, rosids, eurosids II, Brassicales, Brassicaceae, Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -1- CAUTION: The sequence shown here is derived from an EMBL/GenBank/DDBJ whole genome shotgun (WGS) entry which is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; AAF101000323; EAL60324.1; -; Genomic_DNA.
Hypothetical protein.
SEQUENCE 70 AA; 8181 MW; 8770C0E45E8CDEDB CRC64;
Dictyostelium discoideum (Slime mold).
Eukaryota, Mycetozoa, Dictyosteliida, Dictyostelium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-DEC-2001, integrated into UniProtKB/TrEMBL.
01-DEC-2001, sequence version 1.
07-FEB-2006, entry version 10.
Arabidopsis thaliana (Mouse-ear cress).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     73 AA.
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Query Match

Matches

ò a RHOBA

RESULT 13

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STRAIN-ISOJATE B264;

Bigger JE., Martin D.W.;

"Identification of an ICP47 homolog in Simian agent 8 (SA8).";

"Identification of an ICP47 homolog in Simian agent 8 (SA8).";

"Identification of an ICP47 homolog in Simian agent 8 (SA8).";

"Identification of an ICP47 homolog in Simian agent 8 (SA8).";

"Identification of an ICP47 homolog in Simian agent 8 (SA8).";

"Identification of an ICP47 homolog in Simian agent 8 associated with antigen processing (TAP), thereby blocking peptide-binding and translocation by TAP as well as subsequent loading of peptides onto MHC class I molecules in the endoplasmic reticulum. In consequence, infected cells are masked for immune recognition by cytotoxic T lymphocytes (By similarity).

"In SUBCELLULAR LOCATION: Cytoplasm (By similarity).

"In DOMAIN: The N-terminal active domain blocks peptide binding to and peptide transport by TAP (By similarity).

"In SUMILARITY: Belongs to the herpesviruses US12 family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms
Distributed under the Creative Commons Attribution-NoDerivs License
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Distributed under the Creative Commons Attribution-NoDerivs License
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ICP47 protein (Infected cell protein 47) (Immediate-early protein IEI2) (Immediate-early-5) (Vmw12) (US12 protein).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      55.6%; Score 5; 52.100.0%; Pred. No. 38+02; 1100.0%; Pred. No. 38+02; Indels
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                                                                      Herpes simplex virus type 2 (strain SA8) (Simian agent 8) Viruses; dsDNA viruses, no RNA stage; Herpesviridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Active domain.
2A3942EF70406125 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cercopithecine herpesvirus 2.
Viruses; dsDNA viruses, no RNA stage; Herpesviridae;
Alphaherpesvirinae; Simplexvirus.
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SEQUENCE 78 AA: 8572 MW; 2A3942EF70406125 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ICP47 protein.
/FTId=PRO_0000115814.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23-NOV-2004, integrated into UniProtKB/TrEMBL. 23-NOV-2004, sequence version 1. 07-FEB-2006, entry version 7. Immediate early protein ICP47.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; AY387672; AAQ90018.1; -; Genomic_DNA.
Early protein; Viral immunoevasion.
CHAIN 178 ICP47 protein.
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                                                                                                                                                                                            NUCLEOTIDE SEQUENCE [GENOMIC DNA]
                                                                                                 Viruses, dsDNA viruses, no RNA st
Alphaherpesvirinae; Simplexvirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QSYONO 9ALPH PRELIMINARY;
QSYONO;
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78 AA; 8572 MW;
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Best Local Similarity 100.0
These 5; Conservative
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Best Local Similarity 100.
Matches 5; Conservative
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                                                                                                                                                NCBI_TaxID=10316;
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                                                     Name=US12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
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                                                                                                                                                                                                                                          Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms Distributed under the Creative Commons Attribution-NoDerivs License
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                        Cheuk R., Chen H., Kim C.J., Shinn P., Bowser L., Carninci P., Chan M.M., Chang C.H., Dale J.M., Hayashizaki Y., Hsuan V.W., Ishida J., Jones T., Kamiya A., Karlin-Neumann G., Kawai J., Lam B., Lee J.M., Lin J., Mirranda M., Narusaka M., Nguyen M., Palm C.J., Quach H.L., Sakurai T., Satou M., Seki M., Southwick A., Tang C.C., Torlund M., wallender E.K., Wung C., Wu H.C., Yamada K., Yu G., Yuan S., Shinozaki K., Davis R.W., Theologis A., Ecker J.R.; Submitted (OCT-2002) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Complete genome sequence of the marine planctomycete Pirellula sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=22735913; PubMed=12835416; DOI=10.1073/pnas.1431443100; Gloeckner F.O., Kube M., Bauer M., Tealing H., Lombardot T., Ludwig W., Gade D., Beck A., Borzym K., Heitmann K., Rabus R., Schleener H., Amann R., Reinhardt R.;
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Bacteria; Planctomycetes; Planctomycetacia; Planctomycetales;
Planctomycetaceae; Pirellula.
                                                                                                                                                                                                                                                                                                                                                                                                      DB 2; Length 73; 2.8e+02;
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Complete proteome; Hypothetical protein.
SEQUENCE 73 AA; 8560 MW; 5A14865F06460F2A CRC64;
                                                                                                                                                                                                                                                                                                            EMBL; AYOS8877; AAL24264.1; -; mRNA.
EMBL; BT001029; AAN46783.1; -; mRNA.
SEQUENCE 73 AA; 8505 MW; EEBAA685EEE95287 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Proc. Natl. Acad. Sci. U.S.A. 100:8298-8303(2003).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-OCT-2003, integrated into UniProtKB/TrEMBL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       73 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                         55.6%; Score 5; DB 2
100.0%; Pred. No. 2.8
tive 0; Mismatches
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100.0%; Pred. No. 2.8
ive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QTUQW7 RHOBA PRELIMINARY; PRT; Q1UQW7;
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01-MAR-2004, sequence version 1.
07-FEB-2006, entry version 12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-OCT-2003, sequence version 1. 07-FEB-2006, entry version 8. Hypothetical protein.
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                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity 100.
es 5, Conservative
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         NUCLEOTIDE SEQUENCE
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Matches 5; Conser
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TCP47 HSV2S
P60504;
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Query Match

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                                                                                                                                                                                                   -i- FUNCTION: Component of the ubiquinol-cytochrome c reductase complex (complex III or cytochrome b-c1 complex), which is a respiratory chain that generates an electrochemical potential coupled to ATP synthesis (By similarity).
-i- COFACTOR: Binds 2 heme groups noncovalently (By similarity).
-i- SUBNIT: The main subunits of complex b-c1 are: cytochrome c1 and the Rieske protein (By similarity).
-i- SIMILARITY: Belongs to the cytochrome b family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GO:0016021; C:integral to membrane; IEA.
GO:0016020; C:membrane; IEA.
GO:0016020; C:membrane; IEA.
GO:0005746; C:mitochondrial electron transport chain; IEA.
GO:0005506; F:iron ion binding; IEA.
GO:0046872; F:metal ion binding; IEA.
GO:0016491; F:oxidoreductase activity; IEA.
GO:0006118; P:electron transport; IEA.
"Phylogeny of the Acipenseriformes: cytogenetic and molecular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Electron transport; Heme; Iron; Metal-binding; Mitochondrion; Respiratory chain; Transmembrane; Transport.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OGUCEO ACRTS PRELIMINARY, PRT; 102 AA.
OGUCEO, O7C2Z7;
01-UN-2002, integrated into UniProtKB/TrEMBL.
01-UN-2002, sequence version 1.
07-FEB-2006, entry version 15.
Hyportetical protein Atulogs (AGR C_2032p).
OrderedLocusNames_AGR C_2032, Atulogs,
Agrobacterium tumefaciens (strain CS8 / ATCC 33970).
Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0; Indels
                                                                                                                                                 Birstein V.;
Submitted (JAN-1996) to the EMBL/GenBank/DDBJ databases.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; X95060; CAA64466.1; -; Genomic_DNA.
Q6LAQ9; 1-89.
                                                          Environ. Biol. Fishes 48:127-155(1997)
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NCBI_TaxID=176299;
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                                                                                                                     NUCLEOTIDE SEQUENCE.
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Larimer F., Land M.; "Annotation of the draft genome assembly of Paracoccus denitrificans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
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US DOE Joint Genome Institute (JGI-PGF);
Copeland A., Lucas S., Lapidus A., Barry K., Detter C., Glavina T.,
Hammon N., Israni S., Pitluck S., Richardson P.;
"Sequencing of the draft genome and assembly of Paracoccus
denitrificans PD1222.";
Submitted (JUN-2005) to the EMBL/GenBank/DDBJ databases.
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Actinopterygii; Neopterygii; Amiiformes; Amiidae; Amia.
NCBI_TaxID=7924;
                                                                                                                                                                                                                                                                                25-0CT-2005, integrated into UniProtKB/TrEMBL.
25-0CT-2005, sequence version 1.
25-0CT-2005, entry version 3.
Hypothetical protein.
4Hypothese=PdenDRAFT 0975;
Paracoccus denitrificans PD1222.
Bacteria; Rhodobacterales;
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-!- CAUTION: The sequence shown here is derived from an EMBL/GenBank/DDBJ whole genome shotgun (WGS) entry which is
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Hypothetical protein.
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100.0%; Pred. No. ...
0; Mismatches
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NUCLEOTIDE SEQUENCE.
Birstein V.J., Hanner R., DeSalle R.;
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07-FEB-2006, entry version 11.
Cytochrome b (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rhodobacteraceae; Paracoccus.
NCBI_TaxID=318586;
                                                                                                                                                                                                                                     PRELIMINARY;
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Amia calva (Bowfin).
Mitochondrion.
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Best Local Similarity
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62 FLRNP 66
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                        FLRNP
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Q3P9Q0;
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QELAQ9;
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RESULT 17
0661A99 AMI
10 0661A90
AC 0661A90
DT 05-JU
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DB CYTOC
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OC MITOC
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Best Local Similarity 100. Matches 5; Conservative
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Q8HHB1 BRA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms Distributed under the Creative Commons Attribution-NoDerivs License
                                                                                                            MUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].
MEDLINE=21608551; PubMed=11743194; DOI=10.1126/science.1066803;
Goodner B., Hinkle G., Gattung S., Miller N., Blanchard M.,
Qurollo B., Goldman B.S., Cao Y. Askenazi M., Halling C., Mullin L.,
Houmiel K., Gordon J., Vaudin M., Iartchouk O., Epp A., Liu F.,
Wollam C., Allinger M., Doughty D., Scott C., Lappas C., Markelz B.,
Flanagan C., Crowell C., Gurson J., Lomo C., Sear C., Strub G.,
Gielo C., Slater S.;
"Genome sequence of the plant pathogen and blotechnology agent
genome of the natural genetic engineer Agrobacterium tumefaciens
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Copeland A., Lucas S., Lapidus A., Barry K., Detter C., Glavina T., Hammon N., Israni S., Pitluck S., Richardson P.;
Submitted (JUN-2005) to the EMBL/GenBank/DDBJ databases.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    55.6%; Score 5; DB 2; Length 102; 100.0%; Pred. No. 3.8e+02; ive 0; Mismatches 0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Complete proteome; Hypothetical protein.
SEQUENCE 102 AA; 11833 MW; 18E8C364A6B5D911 CRC64;
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EMBL; AE008039; AAK86904.1; -; Genomic_DNA.
PIR; AI2711; AI2711.
PIR; G97493; G97493.
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Q3X8M6;
                                                                                                                                                                                                                                                                                                                                                                                                Agrobacterium tumefaciene C58.";
Science 294:2323-2328(2001).
                                                         Science 294:2317-2323(2001)
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Best Local Similarity
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                                                                                                 Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms Distributed under the Creative Commons Attribution-NoDerivs License
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                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
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Lepidosauria; Squamata; Iguania; Iguanidae; Iguaninae; Brachylophus.
NCBI_TaxID=46195;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Houlden B.A., Costello B.H.;
Submitted (DEC-2001) to the EMBL/GenBank/DDBJ databases.

-!- FUNCTION: Component of the ubiquinol-cytochrome c reductase complex (complex III or cytochrome b-c1 complex), which is a respiratory chain that generates an electrochemical potential coupled to ATP synthesis (By similarity).

-!- COFACTOR: Binds 2 heme groups noncovalently (By similarity).

-!- SUBUNIT: The main subunits of complex b-c1 are: cytochrome b, cytochrome c1 and the Rieske protein (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R GO; GO:0016021; C:integral to membrane; IEA.
R GO; GO:0016020; C:membrane; IEA.
R GO; GO:0005746; C:mitochondrial electron transport chain; IEA.
GO; GO:0005739; C:mitochondrial electron transport chain; IEA.
R GO; GO:0005506; F:iron ion binding; IEA.
R GO; GO:0006812; F:metal ion binding; IEA.
R GO; GO:0016491; F:oxidoreductase activity; IEA.
R GO; GO:0016491; F:oxidoreductase activity; IEA.
R InterPro; IPRO05797; Cytb b6.N.
R PERMSTER: PS51002; Cytb b6.N.
R PROSITE; RS51002; Cytb NTER; 1.
N Electron transport; Heme; Iron; Metal-binding; Mitochondrion;
EMBL/GenBank/DDBJ whole genome shotgun (WGS) entry which is
preliminary data.
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                                                                                                                                                                                                                                                                                                                                       Score 5; DB 2; Length 106;
Pred. No. 3.9e+02;
                                                                                                                                                                                                                                                                                                                                                                                                         0; Indels
                                                                                                                                                                                                                                         Hypothetical protein.
SEQUENCE 106 AA; 11797 MW; BAAECE90D0E03909 CRC64;
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                                                                                                                                                                                                   EMBL; AADX02000011; EAN02160.1; -; Genomic_DNA.
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                                                                                                                                                                                                                                                                                                                  55.6%; Scc...
100.0%; Pred. No. ...
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Mitochondrion.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-MAR-2003, sequence version 1. 07-FEB-2006, entry version 15. Cytochrome b (Fragment).
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Best Local Similarity
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SEQUENCE
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04JJL5 ANOGA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Xylella fastidiosa.
Bacteria; Proteobacteria; Gammaproteobacteria; Xanthomonadales;
Xanthomonadaceae; Xylella.
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SEQUENCE 111 AA; 12524 MW; AFC5CB4D03672AD5 CRC64;
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                                                                                                                                                                                                              QPPGQ1_XYLFA PRELIMINARY; PRT; 111 AA. Q9PGQ1; 01-0CT-2000, integrated into UniProtKB/TrEMBL. 01-0CT-2000, sequence version 1. 07-FEB-2006, entry version 16. Hypothetical protein. OrderedLocusNames=Xf0247;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].
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O4JJK6_ANOGA PRELIMINARY; PRT; 120 AA.
O4JJK6;
02-AUG-2005, integrated into UniProtKB/TrEMBL.
02-AUG-2005, sequence version 1.
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PIR; B82830; B82830.
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100.0%; Pred. No. 4.1
ive 0; Mismatches
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WFLRN 51
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                                                                                                                     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
Neoptera; Endopterygota; Diptera; Nematocera; Culicoidea; Culicidae;
Anophelinae; Anopheles.
NCBL_TaxID=7165;
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Bukaryota, Metazao, Arthropoda, Hexapoda; Insecta, Pterygota,
Neoptera; Endopterygota; Diptera, Nematocera; Culicoidea; Culicidae;
Anopheline; Anopheles.
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120 Aa; 13907 MW; A68D5AABEC5C60A8 CRC64;
                                                                                                                                                                                                                                                                                                                                              PubMed=16076241; DOI=10.1371/journal.pbio.0030285;
Turner T.L., Hahn M.W., Nuzhdin S.V.;
"Genomic islands of speciation in Anopheles gambiae.";
PLOS BIOl. 3:E285-E285(2005).
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STRAIN=S3, S5, S6, and S13;
PubMed=16076241; DOI=10.1371/journal.pbio.0030285;
Furner T.L., Hahn M.W., Nuzhdin S.V.;
"Genomic islands of speciation in Anopheles gambiae.";
PLOS Biol. 3:E285-E285(2005).
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                                                                                          Anopheles gambiae (African malaria mosquito)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; DQ080906; AAY89552.1; -; Genomic DNA.
EMBL; DQ080904; AAY89550.1; -; Genomic DNA.
GO; GO:0004872; F:receptor activity; IEA.
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EMBL; DQ08093; AAY89549.1; -; Genomic_DNA.
EMBL; DQ080893; AAY89559.1; -; Genomic_DNA.
GO; GO:0004872; F:receptor activity; IEA.
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07-FEB-2006, entry version 5.
Olfactory receptor 38 (Fragment).
Name=GPRor38;
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Matches 5, Conservative
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Bukaryota, Metazao, Arthropoda; Hexapoda; Insecta; Pterygota;
Neoptera; Endopterygota; Diptera; Nematocera; Culicoidea; Culicidae;
Anophelinee; Anopheles.
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                                                                                                                                         55.6%; Score 5; DB 2; Length 120; 100.0%; Pred. No. 4.46+02; tive 0; Mismatches 0; Indels
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PubMed=16076241; DOI=10.1374/journal.pbio.0030285;
Turner T.L., Hahn M.W., Nuzhdin S.V.;
Tenomic islands of speciation in Anopheles gambiae.";
PLOS Biol. 3:E285-E285(2005).
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120 AA; 13864 MW; 896B43540A5C60BB CRC64;
                                                                                   55.6%; Score 5; DB 2; Let 100.0%; Pred. No. 4.4e+02; ive 0; Mismatches 0;
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EMBL; DQ080899; AAY89535.1; -; Genomic_DNA.
EMBL; DQ080890; AAY89536.1; -; Genomic_DNA.
EMBL; DQ080894; AAY89540.1; -; Genomic_DNA.
EMBL; DQ080898; AAY89541.1; -; Genomic_DNA.
EMBL; DQ080999; AAY89541.1; -; Genomic_DNA.
EMBL; DQ080905; AAY89551.1; -; Genomic_DNA.
EMBL; DQ080905; AAY89551.1; -; Genomic_DNA.
EMBL; DQ080907; AAY89551.1; -; Genomic_DNA.
EMBL; DQ0809088; AAY89553.1; -; Genomic_DNA.
EMBL; DQ080886; AAY8953.1; -; Genomic_DNA.
EMBL; DQ080886; AAY8953.1; -; Genomic_DNA.
EMBL; DQ080886; AAY8953.1; -; Genomic_DNA.
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                           EMBL; DQ080895; AAY89541.1; -; Genomic DNA.
GO; GO:0004872; F:receptor activity; IEA.
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07-FRB-2006, entry version 5.
Olfactory receptor 38 (Fragment).
Name-CPRori38,
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                                                                                                                                                                         5; Conservative
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                                                                                                                                                           Local Similarity
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Q4JJN3 ANO
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Q4JJM4 ANO
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Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
Neoptera; Endopterygota; Diptera; Nematocera; Culicoidea; Culicidae;
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100.0%; Pred. No. 4.4e+02;
tive 0; Mismatches 0; Indels
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120 120
120 AA; 13890 MW; 896B435410EC60BB CRC64;
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Turner T.L., Hahn M W., Nuzhdin S.V.;
"Genomic islands of speciation in Anopheles gambiae.";
PLoS Biol. 3:E285-E285(2005).
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                                                                                                                                          Q4JJL6_ANOGA PRELIMINARY; PRT; 120 AA. Q4JJL6_2NL6; integrated into UniProtKB/TrEMBL. 02-AUG-2005, sequence version 1.
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EMBL; DQ08090; AAX89546.1; -; Genomic_DNA.
EMBL; DQ080892; AAX89548.1; -; Genomic_DNA.
GQ; GQ:0004872; F:receptor activity; IEA.
   Mismatches
                                                                                                                                                                                                       07-FEB-2006, entry version 5.
Olfactory receptor 38 (Fragment).
Name=GPRor38;
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07-FEB-2006, entry version 4.
Olfactory receptor 38 (Fragment).
Name=CPRox38;
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NCBL_TaxID=7165;
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55.6%; Score 5; DB 2; Length 122; 100.0%; Pred. No. 4.4e+02;
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Alkalilimnicola ehrlichei MLHE-1.
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07-FEB-2006, entry version 3.
Hypothetical protein.
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Best Local Similarity
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                                                                                                   Anopheles gambiae (African malaria mosquito).
Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
Neoptera; Endopterygota; Diptera; Nematocera; Culicoidea; Culicidae;
Anophelinae; Anopheles.
NCBI_TaxID=7165;
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Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
Neoptera; Endopterygota; Diptera; Nematocera; Culicoidea; Culicidae;
Anophelinae; Anopheles.
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STRAIN=M1, M10, M11, M15, M17, M2, M3, M5, M6, M7, M9, M9,
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"Genomic islands of speciation in Anopheles gambiae.";
PLoS Biol. 3:E285-E285(2005).
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Turner T.L., Hahn M.W., Nuzhdin S.V.;
"Genomic islands of speciation in Anopheles gambiae.";
PLOS Biol. 3:E285-E2285(2005).
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                                                                                                                                                                                                                                                                                                         PubMed=16076241; DOI=10.1371/journal.pbio.0030285;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     55.6%; Score 5; DB 2; Ler 100.0%; Pred. No. 4.4e+02; tive 0; Mismatches 0;
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DQ080864; AAY89510.1; -; Genomic DNA.
DQ080866; AAY89511.1; -; Genomic DNA.
DQ080866; AAY89512.1; -; Genomic DNA.
DQ080868; AAY89513.1; -; Genomic DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; DQ080879; AAY89525.1; -; Genomic DNA.
GO; GO:0004872; F:receptor activity; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q4JJP9 ANOGA PRELIMINARY; PRT; Q4JJP9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 02-AUG-2005, sequence version 1. 07-FEB-2006, entry version 5. Olfactory receptor 38 (Fragment).
02-AUG-2005, sequence version 1.
OY-FEB-2006, entry version 4.
Olfactory receptor 38 (Fragment).
Name-GPRor38;
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DQ080873; AAY89519.1;
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DQ080871; AAY89517.1
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99 WFLRN 103
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US DOE Joint Genome Institute (JGI-ORNL);
Larimer F., Land M.;
"Annotation of the draft genome of Alkalilimnicola ehrlichei MLHE-1.";
Submitted (NOV-2005) to the EMBL/GenBank/DDBJ databases.
-!- CAUTION: The sequence shown here is derived from an
EMBL/GenBank, DDBJ whole genome shotgun (WGS) entry which is
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US DOE Joint Genome Institute (JGI-PGF);
Copeland A., Lucas S., Lapidus A., Barry K., Detter J.C., Glavina T.,
Hammon N., Israni S., Pitluck S., Richardson P.;
"Sequencing of the draft genome and assembly of Alkalilimnicola
ehrlichei MLHE-1.";
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Ectothiorhodospiraceae, Alkalilimnicola.
NCBI_TaxID=187272;
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120 AA; 13891 MW; 896B43541D5A60BB CRC64;
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hes 0;
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5; AAY89521.1; -; Genomic_DNA.
6; AAY89522.1; -; Genomic_DNA.
8; AAY89523.1; -; Genomic_DNA.
8; AAY89524.1; -; Genomic_DNA.
9; AAY89526.1; -; Genomic_DNA.
1; AAY89520.1; -; Genomic_DNA.
1; AAY89529.1; -; Genomic_DNA.
2; AAY89530.1; -; Genomic_DNA.
2; AAY89531.1; -; Genomic_DNA.
2; AAY89531.1; -; Genomic_DNA.
2; AAY89531.1; -; Genomic_DNA.
2; AAY89531.1; -; Genomic_DNA.
3; AAY89531.1; -; Genomic_DNA.
3; AAY89531.1; -; Genomic_DNA.
3; AAY89531.1; -; Genomic_DNA.
3; AAY89531.1; -; Genomic_DNA.
3; AAY89531.1; -; Genomic_DNA.
3; AAY89531.1; -; Genomic_DNA.
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100.0%; Pred. No. 4.4
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STRAIN=HI2424;
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  Gaps
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Copeland A., Lucas S., Lapidus A., Barry K., Detter C., Glavina T.,
Hammon N., Israni S., Pitluck S., Richardson P.;
"Sequencing of the draft genome assembly of Burkholderia cenocepacia
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Bacteria, Proteobacteria, Betaproteobacteria, Burkholderiales,
Burkholderiaceae, Burkholderia, Burkholderia cepacia complex.
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Submitted (JUN-2005) to the EMBL/GenBank/DDBJ databases.
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GO; GO:0016787; F:hydrolase activity; IEA.
InterPror; IRRO00086; WUDIX_hydrolase.
Emm; PF00293; NUDIX; 1.
PRINTS; PR00502; NUDIXFAMILY.
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                                                                                                                                                                                                                     13-SEP-2005, integrated into UniProtKB/TrEMBL.
13-SEP-2005, sequence version 1.
07-FEB-2006, entry version 5.
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  Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                           NUCLEOTIDE SEQUENCE.
STRAIN=AU 1054;
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                                                                              91 FLRNP 95
                                     5 FLRNP 9
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  Matches
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04LWW9 9BU
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NOD-derived CD11c +ve dendritic cells CDNA, RIKEN full-length enriched
library, clone:F630306D02 product:hypothetical protein, full insert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PubMed=16141072; DOI=10.1126/science.1112014;
Carninci P., Kasukawa T., Katayama S., Gough J., Frith M.C., Maeda N.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ocyaculus (Mouse).
Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi;
Mammalia, Butheria, Buarchontoglires, Glires, Rodentia, Sciurognathi;
Muroidea, Muridae, Murinae, Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US DOE Joint Genome Institute (JGI-ORNL);
Larimer F., Land M.;
"Annotation of the draft genome assembly of Burkholderia cenocepacia
                                                                                                                                                                                                US DOB Joint Genome Institute (JGI-PGF);
Copeland A., Lucas S., Lapidus A., Barry K., Detter C., Glavina T.,
Hammon N., Israni S., Pitluck S., Richardson P.;
"Sequencing of the draft genome assembly of Burkholderia cenocepacia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
Bacteria, Proteobacteria, Betaproteobacteria, Burkholderiales,
Burkholderiaceae, Burkholderia, Burkholderia cepacia complex.
NCBI_TaxID=331272,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted (JUN-2005) to the EMBL/GenBank/DDBJ databases.
-!- CAUTION: The sequence shown here is derived from an EMBL/GenBank/DDBJ whole genome shotgun (WGS) entry which
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      55.6%; Score 5; DB 2; Length 122; 100.0%; Pred. No. 4.4e+02; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                        Submitted (JUN-2005) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       122 AA; 13802 MW; CB2DFE15F6633A37 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    preliminary data.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; AAHLO1000008; EAM20523.1; -; Genomic_DNA.
GO; GO:0016787; F:hydrolase activity; IEA.
InterProj IPR000066; NUDIX_hydrolase.
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"High-efficiency full-length cDNA cloning.";
Methods Enzymol. 303:19-44(1999).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRINTS; PR00502; NUDIXFAMILY. PROSITE; PS00893; NUDIX; 1.
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RA Oyama R., Ravasi T., Lenhard B., Wells C., Kodzius R., Shimokawa K., RA Bajic V.B., Baralov S., Forrest A.R., Zavolan M., Banic V.B., Milming L.G., Aldinis V., Allen J.E., Andesi-Impiombato A., Apweller R., Aturalya R.N., Balley T.L., Annesi-Impiombato A., Apweller R., Aturalya R.N., Balley T.L., Bansal M., Barter L., Beisel K.W., Bersano T., Bono H., Chalk A.M., R. Crowe M.L., Dalla E., Dalrymple B.P., G Bono B., Della Gatta G., Pletcher C.F., Fukushima T., Engstrom P., Fagiolini M., Faulkner G., Fletcher C.F., Fukushima T., Engstrom P., Fagiolini M., Faulkner G., Fletcher C.F., Fukushima T., Engstrom P., Fagiolini M., Faulkner G., Fletcher C.F., Fukushima T., Engstrom P., Fagiolini M., Faulkner G., Fletcher C.F., Fukushima T.R., Gojobori T., Green R.B., Gustincich S., Harbers M., Hapashi Y., Hens K., Ishikawa T., Katoh M., Kadoh M., Ikeo K., Iwama A., Ishikawa T., Katoh M., Kawasawa Y., Kalso J., Kitamura H., Katoh M., Kadoh M., Ikeo K., Imama A., Ishikawa T., Katoh M., Kawasawa Y., Kalso J., Kitamura H., Kumeruda H., Marsucawa S., Miki H., Magnone F., Miyake S., Morris K., Inuni S., McMilliam S., Madan Babu M., Madera M., Marchionni L., Liu J., Liuni S., McMilliam S., Reed J., Reid J.F., Ring B.Z., Ringwald M., Rotton R., Nishiguchi S., Nishikawa S., Nichikawa S., Nories W., Okara O., Nories W., Okara O., Sensa L., Sheng Y., Schopach C., Sensa L., Sens S., Sensa L., Sheng E., Schopach C., Sensa L., Sheng Y., Schopach C., Sensa L., Sheng E., Suluara K., Silva D., Sinclair B., Serling S., Stupka E., Suluara K., Silva D., Sinclair B., Victama M., Adamarishi H., Zabarovsky E., Taylor M.S., Technan S., Technan S.M., Wei G. H., Wei G., Sasaki D., Taylor M., Ator Y., Sasaki D., Taylor M., Ator Y., Sasaki D., Taylor M., Ator Y., Sasaki D., Taylor M., Ator Y., Sasaki D., Taylor M., Ator Y., Sasaki D., Taylor M., Ator Y., Sasaki D., Taylor M., Sasaki D., Taylor M., Sasaki D., Taylor M., Sasaki D., Taylor M., Sasaki D., Taylor M., Sasaki D., Taylor M., Sasaki D., Taylor M., Sasaki D., Taylor M., Sasaki D., Marandish Michael S. Sator R., Saitor R., Suzuki H., Yamanaka I., Kodoo S., Nikaido I., Osato N., Saitor R., Suzuki H., Yamanaka I., Kiyosawa H., Nikaido I., Osato N., Saitor R., Suzuki H., Yamanaka I., Kiyosawa H., Nikaido I., Osato N., Saitor R., Suzuki H., Yamanaka I., Kiyosawa H., Baldarelli R., Hill D.P., Bult C., Hume D.A., Quackenbush J., Baldarelli R., Hill D.P., Bult C., Hume D.A., Quackenbush J., Balake J.A., Bradt D., Brusic V., Chothia C., Corbani L.E., Cousins S., Dalla E., Dragami T.A., Fletcher C.F., Forrest A., Farer K.S., Gasterland T., Gariboldi M., Gissi C., Gordik A., Gough J., Grimmond S., Gustincich S., Hirokawa N., Jackson I.J., Jarvis E.D., Kanai A., Kawasi H., M., King B.L., Kawasi H., Marchioni L., McKenzie L., Miki H., Knai B.L., Marchioni L., McKenzie L., Miki H., Magoltt D.R., Maltais L., Marchioni L., McKenzie L., Miki H., Barasi T., Reed J.C., Reed D.J., Ramachandran S., Sandelin A., Schneider C., Semple C.A., Setou M., Shimada K., Sandelin A., Schneider C., Semple C.A., Setou M., Shimada K., Walner R., Taylor M.S., Tasadale R.D., Tomita M., Vang I., Yang I., Yang I., Yang I., Wangare L., Wahestedt C., Wang Y., Watanabe Y., Wells C., Wang Y., Watanabe Y., Walls C., Winnig L.G., Wynshaw-Boris A., Yanagisawa M., Yang I., Yang I., Hirozane-Kishikawa T., Konno H., Nakamura M., Sakazume N., Sato K., Shiraki T., Waki K., Kawai U., Aizawa K., Arakawa I., Fukuda S., Hara A., Hashizume W., Imotani K., Ishii Y., Itoh M., Kagawa I., PubMed=16141073; DOI=10.1126/science.1112009; RIKEN Genome Exploration Research Group, and Genome Science Group (Genome Network Core Team) and the FANYOM Consortium; "Antisense Transcription in the Mammalian Transcriptome."; Science 309:1554-1566(2005). MEDLINE=22354683; PubMed=12466851; DOI=10.1038/nature01266; 'The transcriptional landscape of the mammalian genome."; Science 309:1559-1563(2005). NUCLEOTIDE SEQUENCE. NUCLEOTIDE SEQUENCE. STRAIN=NOD; STRAIN=NOD

Miyazaki A., Sakai K., Sasaki D., Shibata K., Shinagawa A., Yasunishi A., Yoshino M., Waterston R., Lander E.S., Rogers J., Birney E., Hayashizaki Y.; 55.6%; Score 5; DB 2; Length 122; 100.0%; Pred. No. 4.4e+02; EMBL; AK155491; BAE33291.1; -; mRNA. 60,770 full-length cDNAs."; Nature 420:563-573(2002). Hypothetical protein. SEQUENCE 122 AA; 14 NUCLEOTIDE SEQUENCE. NUCLEOTIDE SEQUENCE. NUCLEOTIDE SEQUENCE. NUCLEOTIDE SEQUENCE. Best Local Similarity Hayashizaki Y. STRAIN=NOD; STRAIN=NOD Query Match

MEDLINE=21085660, PubMed=11217851; DOI=10.1038/35055500;
Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
Arakawa T., Hara A., Fukunishi Y., Konno M., Itoh M., Ishii Y.,
A Aizawa K., Izawa M., Nishi K., Kiyosawa H., Adado J., Yamanaka I.,
A Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,
Radota K., Matsuda H.A., Ashburner M., Batalov S., Casawant T.,
Ruehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,
Nordone P., King B., Ringwald M., Rodriguez I., Sakamoto N.,
Suzuki H., Toyo-oka K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
Wynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S., Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms Distributed under the Creative Commons Attribution-NoDerivs License Birney E., Hayashizaki Y.; $^{\prime}$ "Analysis of the mouse transcriptome based on functional annotation of MEDLINE=20499374; PubMed=11042159; DOI=10.1101/gr.145100;
Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata K., Itoh M.,
Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y.;
Normalization and subtraction of cap-trapper-selected cDNAs to
prepare full-length cDNA libraries for rapid discovery of new genes.";
Genome Res. 10:1617-1630(2000). STRAIN=NOD;
Arakawa T., Carninci P., Fukuda S., Hashizume W., Hayashida K.,
Hori F., Iida J., Imamura K., Imotani K., Itoh M., Kanagawa S.,
Kawai J., Kojima M., Konno H., Murata M., Nakamura M., Ninomiya N.,
Nishiyori H., Nomura K., Ohno M., Sakazume N., Sano H., Sasaki D.,
Shibata K., Shiraki T., Tagami M., Tagami Y., Waki K., Watahiki A.,
Muramatsu M., Hayashizaki Y.; Shibata K., Itoh M., Aizawa K., Nagaoka S., Sasaki N., Carninci P., Konno H., Akiyama J., Nishi K., Kitaunai T., Tashiro H., Itoh M., Sauni N., Ishii Y., Nakamura S., Hazama M., Nishine T., Harada A., Yamamoto R., Matsumoto H., Sakaguchi S., Ikegami T., Kashiwagi K., Fujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watshiwagi K., Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J., Okazaki Y., Muramatsu M., Inoue Y., Kira A., Hayashizaki Y.; "RIKIN integarated sequence analysis (RISA) system-384-format genome Res. 10:1757-1771(2000). "Functional annotation of a full-length mouse cDNA collection."; Nature 409:685-690(2001). MEDLINE=20530913; PubMed=11076861; DOI=10.1101/gr.152600; Muramatsu M., Hayashizaki Y.; Submitted (MAR-2004) to the EMBL/GenBank/DDBJ databases. 14369 MW; DD960A1D968FCB12 CRC64;

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NUCLEOTIDE SEQUENCE
  RC STRAIN-GSTBL/64); TISSUG=Kidney;
RX PAUCECIIDE STRAIN-GSTBL/64); TISSUG=Kidney;
RX PubMed=1614072; DOI=10.1126/Geience.1112014;
RA Davis M.D.; Wilming L.G., Addinis V., Adlen J.E.,
RA Bajic V.B., Bernner S.E., Batelalov S., Forreet A.R., Zavolan M.,
RA Davis M.D.; Wilming L.G., Addinis V., Allen J.E.,
RA Bansal M. Barker L., Beisel K. M. Bersano T., Bono H., Chalk A.M.,
RA Choudhary V., Christoffels A., Clutterbuck D.R.,
Choudhary V., Christoffels A., Clutterbuck D.R.,
A Chow M.L., Dalla B. D. Dayn T., Engstrom P., Fagiolini M., Faulkner G.,
RA Georgi-Hemming P., Gingeras T.R., Gojobori T., Green R.B.,
RA Georgi-Hemming P., Gingeras T.R., Gojobori T. Green R.B.,
RA Hill D., Hunnincki L., Iacono M., Ikoc K., Iwama A., Ishikawa T.,
RA Hill D., Hunnincki L., Iacono M., Ikoc K., Iwama A., Ishikawa T.,
RA Mill D., Hunnincki L., Iacono M., Ikoc K., Iwama A., Ishikawa T.,
RA Matsuda H., Matalawa S., Miki H., Mignone F., Miyake S., Morris K.,
Matsuda H., Matalawa S., Miki H., Mignone P., Miyake S., Morris K.,
Mottagui-Tabar S., Mulder N., Nakano N., Nakauchi H., Ng P.,
Nisson R., Nishiguchi S., Nishikawa S., Nori F., Ohara O.,
A Okazaki Y., Orlando V., Pang K.C., Pavan W.J., Pavesi G., Pescole G.,
RA Forowsky N., Plazaz S., Reed J., Rollian S., Sensa L., Sheng Y.,
Shibata Y., Shimada H., Shimada K., Silva D., Sinclair B.,
Schonbach C., Sekiguchi K., Semple C.A., Seno S., Sessa L., Sandelin A., Schoneider C., Sekiguchi K., Semple C.A., Seno S., Sessa L.,
Rapanishi H., Zabarovsky E., Zhuz S., Reed J., Rollian R., Shimana S., Namada K., Shimada K., Shimada K., Shimada K., Shimada K., Shimada K., Shimada K., Shimada K., Shimada K., Shimada K., Shimada K., Shimada K., Shimada K., Shimada K., Shimada K., Shimada K., Shimada M., Shimada M., Shimada M., Shimada M., Shimada M., Shimada M., Shimada M., Shimada M., Shimada M., Shimada M., Shimada M., Shimada M., Shimada M., Shimada M., Shimada M., Shimada M., Shimada M., Shimada M., Shimada M., Shimada M., Shimada M., Shimada M., Shimada M., Shimada M., Shimada M., Shimada M.,
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MEDLINE=9927953; PubMed=10349636; DOI=10.1016/S0076-6879(99)03004-9;
Carninci P., Hayaehizaki Y.;
"High-efficiency full-length cDNA cloning.";
Methods Enzymol. 303:19-44(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
  Gaps
                                                                                                                                                                                                                                                                                   01-JUN-2001, sequence version 1. 07-JUN-2001, sequence version 19. 07-FEB-2006, entry version 19. 0 day neonate kidney cDNA, RIKEN full-length enriched library, clone:D630002J15 product:hypothetical protein, full insert sequence. Name=D630002J15Rik;
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                                                                                                                                                                                                                127 AA.
  Mismatches
                                                                                                                                                                                                                Q9D1U9_MOUSE PRELIMINARY; PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Muroidea, Muridae, Murinae, Mus.
  ö
  5; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus (Mouse).
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                                                                                              101 VESWF 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=10090;
                                               1 VESWF 5
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coupled to ATP synthesis (By similarity)
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Q9SJC8_ARATH
ID Q9SJC8_ARATH
AC Q9SJC8;
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SEQUENCE
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NUCLEOTIDE SEQUENCE.
Faivovich J., Haddad C.F.B., Garcia P.C.A., Frost D.R., Campbell J.A.,
Wheeler W.C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Adachi J., Aizawa K., Akahira S., Akimura T., Arai A., Aono H., Arakawa T., Bono H., Carninci P., Fukuda S., Fukunishi Y., Furuno M., Hanagaki T., Hara A., Hayatsu N., Hiramoto K., Hiraoka T., Hori F., Imotani K., Ishii Y., Itoh M., Izawa M., Kasukawa T., Kato H., Kawai J., Kojima Y., Konno H., Kouda M., Koya S., Kurihara C., Matsuyama T., Miyazaki A., Nishi K., Nomura K., Numazaki R., Ohno M., Okazaki Y., Okido T., Owa C., Saito H., Saito R., Sakai K., Sano H., Sasaki D., Shibata K., Shibata Y., Shinagawa A., Shiraki T., Sogabe Y., Suzuki H., Tagami M., Tagawa A., Takahashi F., Tanaka T., Tejima Y., Toya T., Yamamura T., Yasunishi A., Yoshino M., Muramateu M., Hayashizaki Y.; Y.
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Bull. Am. Mus. Nat. Hist. 294:1-240(2005).

-I-FUNCTION: Component of the ubiquinol-cytochrome c reductase complex (complex III or cytochrome b-cl complex), which is a respiratory chain that generates an electrochemical potential
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                                                          MEDLINE-2050013; PubMed=11076861; DOI=10.1101/gr.152600; Shibata K., Itoh M., Aizawa K., Nagaoka S., Sasaki N., Carninci P., Shibata K., Itoh M., Aizawa K., Nagaoka S., Sasaki N., Carninci P., Sunio H., Akiyama J., Nishi K., Kitsunai T., Tashiro H., Itoh M., Sumi N., Ishii Y., Nakamura S., Hazama M., Nishine T., Harada A., Yamamoto R., Matsunioto H., Sakaguchi S., Ikegami T., Kashiwagi K., Fuliwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watshiwagi K., Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J., Okazaki Y., Muramatsu M., Inoue Y., Kira A., Hayashizaki Y., "RIKEN integrated sequence analysis (RISA) system-384-format Genome Res. 10:1757-1771(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Phasmanyla guttata (spotted leaf frog).
Mitochondrion.
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Neobatrachia; Hyloidea; Hylidae;
Phyllomedusinae; Phasmahyla.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL, AK021320; BAB32372.1; -; mRNA.
Ensembl; ENSMUSG0000029829; Mus musculus.
MGI: 1924772; D630002J15Rik.
Hypothetical protein.
SEQUENCE 127 AA; 13618 MW; 821555594064C9C1 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27-SEP-2005, integrated into UniProtKB/TrEMBL. 27-SEP-2005, sequence version 1. 07-FBB-2006, entry version 4. Cytochrome b (Fragment).
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[7]
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                                                                                                                                                                                                                                                                                                                      EMBL, AY843961; AAX53355.1; -; Genomic_DNA.

GO; GO:0016021; C:integral to membrane; IEA.

GO; GO:0016020; C:inembrane; IEA.

GO; GO:0005746; C:intcochondrial electron transport chain; IEA.

GO; GO:0005739; C:intcochondrian; IEA.

GO; GO:0005506; F:iron ion binding; IEA.

GO; GO:0016491; F:iron ion binding; IEA.

GO; GO:0016491; F:iron ion binding; IEA.

GO; GO:0016491; F:iron ion binding; IEA.

R GO; GO:0016491; F:iron ion binding; IEA.

R GO; GO:0016491; F:iron ion binding; IEA.

R GO; GO:0016491; F:iron ion binding; IEA.

R GO; GO:0016491; C:iron ion binding; IEA.

R FEM: PF00133; Cytcochrom E N; I.

R FEM: PF00133; Cytcochrom E N; I.

R ROSITE; PS51002; CYTE_NTER; 1.
-:- COFACTOR: Binds 2 heme groups noncovalently (By similarity)
-:- SUBUNIT: The main subunits of complex b-c1 are: cytochrome
cytochrome c1 and the Rieske protein (By similarity).
-:- SIMILARITY: Belongs to the cytochrome b family.
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Submitted (FEB-2002) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14431 MW; 4B3A934082C5C0D2 CRC64;
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SEQUENCE 130 AA; 15034 MW; 7820AD483192E5D3 CRC64;
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07-FEB-2006, entry version 14.
Mypotherical protein At2004410.
OrderedLocusNames-At2004410.
Arabidopsis thaliana (Mouse-ear cress).
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65 FLRNP 69
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Q3QPM1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Venter J.C.;
"Whole-genome random sequencing and assembly of Haemophilus influenzae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Science 269:496-512(1995).

-I- FUNCTION: Seems to be involved in the anchoring of the catalytic components of the fumarate reductase complex to the cytoplasmic membrane (By similarity).

-I- SUBUNIT: Part of an enzyme complex containing four subunits: a flavoprotein (frdA), an iron-sulfur protein (frdB), and two hydrophobic anchor proteins (frdC and frdD) (By similarity).

-I- SUBCELLULAR LOCATION: Bacterial cell inner membrane; multi-pass membrane protein (By similarity).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=95350630; PubMed=7542800; Pleischmann R.D., Adams M.D., White O., Clayton R.A., Kirkness B.F., Rerlavage A.R., Bult C.J., Tomb J.-F., Dougherty B.A., Merrick J.M., McKenney K., Sutton G.G., FitzHogh W., Fields C.A., Gocayne J.D., Scott J.D., Shirley R., Liu L.-I., Glodek A., Kelley J.M., Weidman J.F., Phillips C.A., Spriggs T., Hedblom E., Cotton M.D., Wielmer Y.R., Hanna M.C., Nguyen D.T., Saudek D.M., Brandon R.C., Fine L.D., Fritchman J.L., Fuhrmann J.L., Geoghagen N.S.M., Gnehm C.L., McDonald L.A., Small K.V., Fraser C.M., Smith H.O.,
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Pasteurellaceae; Haemophilus.
NCBI_TaxID=727;
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Pred. No. 4.7e+02;
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03740E833BB58C4A CRC64;
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PIR; F64097; F64097.
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InterPro; IPR003510, Fumarate_red_C.
Pfam, PF02300, Fumarate_red_C; 1.
PIRSF, PIRSF000180; FrdC; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HSSP; P03805; 1KF6.
GenomeReviews; L42023_GR; H10833.
TIGR; H10833; -.
BioCyc; HINF71421:H10833-MONOMER; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ProDom; PD015900; Fumarate_red_C; 1.
                                                                                                                                                                                                                                                                                                                              Name=frdC; OrderedLocusNames=HI0833;
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                                                                                                                                                                                                                                                                                      07-MAR-2006, entry version 38. Fumarate reductase subunit C.
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P44892;
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US DOE Joint denome Institute (JGI-ORNL);
Larimer F., Land M.;
"Annotation of the draft genome assembly of Silicibacter sp. TM1040.";
Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.
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US DOB Joint Genome Institute (JGI-PGF);
Copeland A., Lucas S., Lapidus A., Barry K., Detter C., Glavina T.,
Hammon N., Israni S., Pitluck S., Richardson P.;
Submitted (JUN-2005) to the EMBL/GenBank/DDBJ databases.
-!- CAUTION: The sequence shown here is derived from an
EMBL/GenBank/DDBJ whole genome shotgun (WGS) entry which is
                                                                                                                                                            ORFNAMES=ROSSEDRAFT_0603;
Silicibacter sp. TW1040.
Bacteria; Proteobacteria; Alphaproteobacteria; Rhodobacterales;
Rhodobacteraceae, Silicibacter.
                                                                                                                                                                                                                                                                                                                                                                                                                         Detter C., Glavina
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Sequencing of the draft genome and assembly of Silicibacter sp
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GO; GO:0003824; F:catalytic_activity; IEA.
InterPro; IPR006683; Thioestr_supf.
Pfam; PF03061; 4HF1: 1.
SEQUENCE 134 AA; 15390 MW; EA9AAA9798B222DF94 CRC64;
                                                  25-OCT-2005, integrated into UniProtKB/TrEMBL 25-OCT-2005, sequence version 1. 07-FEB-2006, entry version 3. Thioesterase superfamily.
                                                                                                                                                                                                                                                                                                                                                                                              US DOE Joint Genome Institute (JGI-PGF);
Copeland A., Lucas S., Lapidus A., Barry K.,
Hammon N., Israni S., Pitluck S., Richardson
134 AA.
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PRELIMINARY;
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                                                     PubMed=15968074; DOI=10.1128/JB.187.13.4627-4636.2005;
Harrison A., Dyer D.W., Gillaspy A., Ray W.C., Mungur R., Carson M.B., Zhong H., Gipson J., Gipson M., Johnson L.S., Lewis L., Bakaletz L.O., Munson R.S. Jr.,
"Genomic sequence of an otitis media isolate of nontypeable
Haemophilus influenzae: comparative study with H. influenzae serotype
                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
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-!- FUNCTION: Could be a nuclease that resolves Holliday junction intermediates in genetic recombination.
-!- SUBCELLULAR LOCATION: Cytoplasm (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       16-JUN-2003, sequence version 1.
7-MAR-2006, entry version 20.
Putative Holliday junction resolvase (EC 3.1.-.-).
OrderedLocusNames=bbp492;
Buchnera applidicola subsp. Baizongia pistaciae.
Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
Enterobacteriaceae; Buchnera.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16-JUN-2003, integrated into UniProtKB/Swiss-Prot
                                            NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA]
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                                                                                                                                                                                                                           EMBL, CP000057, AAX87880.1; -; Genomic_DNA. GO; GO:0016020; C:membrane; IEA. GO; GO:0066118; P:electron transport; IEA. Interpro; IPR003510; Fumarate_red_C. Pfam; PP02300; Fumarate_red_C. Pirs; PIRSF000180; FrdC; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; AE016826; AA027197.1; -; Genomic_DNA.
GenomeReviews; AE016826 GR; bbp492.
BioCyc; BAPH224915:BBP492-MONOMER; -.
                                                                                                                                                                                                                                                                                                                 ProDom; PD015900; Fumarate_red_C; 1.
                                                                                                                                          d, strain KW20.";
J. Bacteriol. 187:4627-4636(2005).
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InterPro; IPR005227; HJR YGGF.
InterPro; IPR01537; KN8SEH fold.
InterPro; IPR006641; YGGF.
Pfam; PF03652; UPF0081; 1.
SMART; SM00732; YGGFc; 1.
Pasteurellaceae; Haemophilus.
NCBI_TaxID=281310;
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Best Local Similarity 100.0
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SEQUENCE 136 AA;
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69 FLRNP 73
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RUVX_BUCBP
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                                                                                                                                                                                                                      Gaps
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TIGRFAMS; TIGR00250; HJR YGGF; 1.
Complete proteome; DNA damage; DNA recombination; DNA repair;
                                                                                                                                                                    55.6%; Score 5; DB 1; Length 137; 100.0%; Pred. No. 4.9e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  55.6%; Score 5; DB 2; Length 138; 100.0%; Pred. No. 4.9e+02; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DeLong E.F.;
Submitted (DEC-2003) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Heidelberg J.F., Eisen J.A., Nelson W.C., DeLong E.F., Submitted (NOV-2003) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL, AY458637; AAR37685.1; -; Genomic_DNA.
InterPro; IPR009562; DUF1178.
Pfam; PF06676; DUF1178; 1.
Hyporp. PIRSF011; UCP032131; 1.
Hyporbetical protein.
SEQUENCE 138 AA; 15923 MW; OEBA7FF1D348B9B7 CRC64;
                                                                                               /FTId=PRO 0000172036.
137 AA; 15606 MW; 54484DBB43E1E05F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   65-JUL-2004, integrated into UniProtKB/TrEMBL.
05-JUL-2004, sequence version 1.
07-FBB-2006, entry version 6.
07-PBB-2006, entry version 6.
08-FNNames=EBAC750-02405.3;
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Job time : 148.25 secs
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                                               Hydrolase; Nuclease.
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Title: Perfect score:

Sequence:

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     GenCore version 5.1.9 (c) 1993 - 2006 Biocceleration Ltd.
                                                                                                                      Total number of hits satisfying chosen parameters:
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The present invention relates to an isolated and purified ApoptoM peptide. The invention is useful as a vaccine for the prevention and readement of pathological conditions from non-specific febrile illnesses to severe hemorrhagic manifestations, encephalitic syndromes and these pathological conditions are linked to Plavivirus infection or cancers. The invention is also useful in gene therapy. The present sequence is a p(95-114) EGFP (enhanced green fluorescent protein) (MI-M40) DEN (dengue) -2 (136F) plasmid DNA encoded protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New isolated and purified ApoptoM peptide comprises 9 amino acids, useful as a vaccine for preventing or treating pathological conditions from nonspecific febrile illnesses to severe hemorrhagic manifestations or encephalitic syndromes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gene therapy, protein purification; virucide; cytostatic; vaccine; hemorrhage; bleeding; infection; flavivirus infection; neoplasm; cancer; DEN; dengue; mutant; mutein.
                                       Gene therapy, protein purification, virucide, cytostatic, vaccine, hemorrhage, bleeding, infection, flavivirus infection, neoplasm; cancer, DEN, dengue, EGFP, enhanced green fluorescent protein.
p(95-114) EGFP(M1-M40)DEN-2 (136F) plasmid DNA encoded protein #3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 98.2%; Score 54; DB 9; Length 48; 88.9%; Pred. No. 0.031; ive 1; Mismatches 0; Indels
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/note= "Encoded by GTTTTC"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure; SEQ ID NO 35; 30pp; English.
                                                                                                                                                                                                                                                                                             note= "Encoded by GAC"
                                                                                                                                                                                                                                                      /note= "Encoded by GGC"
                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADW12595 standard; peptide; 9 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 M32-40/DEN-2 mutant protein #1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10-JUN-2003; 2003US-00608029
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                                                                                                                                                                                                                                                                                                                   Misc-difference 13.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 48 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present invention relates to an isolated and purified ApoptoM peptide. The invention is useful as a vaccine for the prevention and treatment of pathological conditions from non-specific febrile illnesses to severe hemorrhagic manifestations, encephalitic syndromes and these pathological conditions are linked to Flavivirus infection or cancers. The invention is also useful in gene therapy. The present sequence is a M1-40/DBN (dengue)-2 (P36) mutant protein.
                                                                                                                                                                                                                                                                                                                                                                                                    Gene therapy; protein purification; virucide; cytostatic; vaccine; hemorrhage; bleeding; infection; flavivirus infection; neoplasm; cancer; DEN; dengue; mutant; mutein.
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Pred. No. 0.025;
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                                                                                                                           ALIGNMENTS
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                                                                                                                                                                                                                                                                                                                                                           M1-40/DEN-2 (F36) mutant protein.
                                                                                                                                                                                                                                  ADW12582 standard; peptide; 39
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88.9%;
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                                                                                                                                                                                                    Query Match
Best Local Similarity 77.0
Local 7; Conservative
                                     encephalitic syndromes.
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                                                                                                                                                                                                                                                                                           13 IETWILRHP
     as a vaccine for specific febrile
New isolated and
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                                                                                                                                                                                          Sequence 21 AA;
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Pred. No. 2.18+06;
Transtones 1; Indels
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                                                                                  30-JUN-2003; 2003US-00608029
                                                                                                           30-JUN-2003; 2003US-00608029
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Best Local Similarity 7...
7; Conservative
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IETWILRHP 9
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                                 US2004266987-A1
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          Dengue virus
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purified ApoptoM peptide comprises 9 amino acids, useful preventing or treating pathological conditions from non-illnesses to severe hemorrhagic manifestations or
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                                                                                                                                                                                                                                                                                                             The present invention relates to an isolated and purified ApoptoM peptide. The invention is useful as a vaccine for the prevention and treatment of pathological conditions from non-specific febrile illnesses to severe hemorrhagic manifestations, encephalitic syndromes and these pathological conditions are linked to Plavivirus infection or cancers. The invention is also useful in gene therapy. The present sequence is a M20-40/DEN (dengue)-2 mutant protein.
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Pred. No. 0.15;
1; Mismatches
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Sequence 40 AA;
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                                                                                                                                                                  Gene therapy; protein purification; virucide; cytostatic; vaccine; hemorrhage; bleeding; infection; flavivirus infection; neoplasm; cancer;
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Pred. No. 0.3;
  Length 32;
                   1; Indels
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 DB 9;
                   1; Mismatches
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 Score 48;
Pred. No.
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                                                                                               ADW12576 standard; peptide; 39
                                                                                                                                                                                                                                                        30-JUN-2003; 2003US-00608029.
 87.3%;
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(first entry)
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Best Local Similarity 77.6
Matches 7; Conservative
                   Conservative
                                                                                                                                                                                                                                                                                                                                                                     encephalitic syndromes
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31 IETWILRHP 39
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24 IETWILRHP 32
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                                   1 VETWFLRHP
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Query Match
Best Local Similarity
Matches 7; Conser
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 39 AA;
                                                                                                                                24-MAR-2005
                                                                                                                                                                                                     Dengue virus
                                                                                                                                                                                    DEN; dengue.
                                                                                                                                                                                                                                      30-DEC-2004.
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18-APR-2002
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The invention relates to pro-apoptotic fragments of the Dengue virus (DEN) pRM and E glycoproteins, methods for screening molecules capable of inducing apoptosis in a cell. The invention particularly relates to DEN-1 M (a membrane protein anchored in envelope surrounding the nucleocapsid of the virus) ectodomain sequence, Den-1-C amino acid sequence and DEN-2 M ectodomain sequence. Sequences of the invention are useful for inducing apoptosis in a cell of a partient suffering from cancer or flavivirus infection. They are also useful for screening molecules which inhibit apoptosis. The present sequence is DEN-2 virus M ectodomain. (Updated on 29-AUG-2003 to standardise OS field)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Novel apoptosis inducing polypeptide fragments of Dengue virus-1 or 2 protein, useful for inducing apoptosis in a cell of a human patient suffering from cancer or flavivirus infection.
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                                                           Dengue virus, pRM glycoprotein; E glycoprotein; apoptosis; virucide; cancer; flavivirus infection; cytostatic; DEN-2 M ectodomain.
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Pred. No. 0.3;
1; Mismatches
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Dengue (DEN)-2 virus M ectodomain.
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                                                                                                                                                                                                                                                                                                                                                                                                                     16-JUN-2000; 2000US-0212129P.
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Best Local Similarity 77.8
Matches 7; Conservative
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32 IETWILRHP 40
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rile illnesses to severe hemorrhagic manifestations or
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (95-114)EGFP(206-245)DEN-2 fusion protein.
                                                                                                                                                                                                                                                                                                                                                           Example 3; SEQ ID NO 25; 30pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Deubel V,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAE17433 standard; protein; 48 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18-JUN-2001; 2001WO-IB001570
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity 77.8
les 7; Conservative
                                                                                                                                                                                                                                                                                              encephalitic syndromes.
                                                                                         Catteau A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        :||| ||||
32 IETWILRHP 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Despres P, Courageot
                              (INSP ) INST PASTEUR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 VETWFLRHP 9
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N-PSDB; AAD27335.
                                                                                                                                                WPI; 2005-047647/05
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Misc-difference 13
                                                                                                                                                                                                                                         as a vaccine for
specific febrile
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Dengue virus; 2.
Dengue virus; 1.
Unidentified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 40 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200196376-A2
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                                                                                         Despres P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAE17433;
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(DEN) pRM and Eglycoproteins, methods for screening molecules capable of inducing apoptosis and methods of inducing apoptosis in a cell. The invention particularly relates to DEN-1 M (a membrane protein anchored in cenvelope surrounding the nucleocapsid of the virus) ectodomain sequence. Den-1-C amino acid sequence and DEN-2 M ectodomain sequence. Sequences of the invention are useful for inducing apoptosis in a cell of a patient suffering from cancer or flavivirus infection. They are also useful for screening molecules which inhibit apoptosis. The present sequence is (95-114) EGFP(206-245)DEN-2 fusion protein construct. This construct comprises 95-114 of the C-terminus of the C-protein of the DEN-1 virus strain BR/90 fused to the N-terminus of enhanced green fluorescent protein (EGFP) and DEN-2 virus strain Jamaica M ectodomain (DEN-2 polyprotein) fused to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention relates to a novel recombinant or synthetic polypeptide comprising an amino acid sequence that has at least about 90% sequence identity to any of the 20 fully defined amino acid sequences given in the specification. The polypeptide of the invention demonstrates virucide activity and may be useful for inducing an immune response to altaviviruses (arboviruses group B), including Dengue viruses, as well as in detecting and/or diagnosing the presence of antibodies against the Dengue virus serotypes in a sample and for gene therapy. The current
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New recombinant or synthetic polypeptides and polynucleotides useful for diagnosing, preventing or treating diseases associated with flaviviruses, including dengue viruses.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     virucide; Flavivirus; arboviruses group B; gene therapy; truncated prM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                             The invention relates to pro-apoptotic fragments of the Dengue virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Dengue virus C15/truncated prM antigen fusion protein - SEQ ID 122.
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                                                                                                                                                                                                                                                                                                                                                                                                         Score 48; DB 5; Length 48;
Pred. No. 0.37;
1; Mismatches 1; Indels
suffering from cancer or flavivirus infection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Disclosure; SEQ ID NO 122; 409pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADN37497 standard; protein; 167 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Brinkman AM
                                    Claim 42; Fig 11; 45pp; English
                                                                                                                                                                                                                                                                                                                                    C-terminus of the EGFP sequence
                                                                                                                                                                                                                                                                                                                                                                                                           87.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26-FEB-2003; 2003WO-US005918.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      26-FEB-2002; 2002US-0360030P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity 77.8
Matches 7; Conservative
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40 IETWILRHP 48
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2004-043106/04.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (MAXY-) MAXYGEN INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 VETWFLRHP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO2003102166-A2.
                                                                                                                                                                                                                                                                                                                                                                         Sequence 48 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Dengue virus.
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                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             capsid.
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ADN37497
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The invention relates to a novel recombinant or synthetic polypeptide comprising an amino acid sequence that has at least about 90% sequence identity to any of the 20 fully defined amino acid sequences given in the specification. The polypeptide of the invention demonstrates virucide activity and may be useful for inducing an immune response to Plaviviruses (arboviruses group B), including Dengue viruses, as well as in detecting and/or diagnosing the presence of antibodies against the Dengue virus serotypes in a sample and for gene therapy. The current antigen fusion protein of the invention which comprises the C-terminal 15 amino acids of the cappid protein fused to a truncated form of the protein lacking the C-terminal 15 amino acids.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
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sequence is that of a Dengue virus C15/truncated prM antigen fusion protein of the invention which comprises the C-terminal 15 amino acids of the capsid protein fused to a truncated form of the prM protein lacking the C-terminal 15 amino acids.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New recombinant or synthetic polypeptides and polynucleotides useful for diagnosing, preventing or treating diseases associated with flaviviruses, including dengue viruses.
                                                                                                                                                                                                                                                                                                                                                                                                                virucide; Flavivirus; arboviruses group B; gene therapy; truncated prM;
                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                               Dengue virus type 2 (DEN-2) C15/truncated prM antigen fusion protein.
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Pred. No. 1.5;
1; Mismatches 1; Indels
                                                                                                           Score 48; DB 8; Length 167;
Pred. No. 1.4;
1; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Disclosure; SEQ ID NO 118; 409pp; English.
                                                                                                                                                                                                                                                                                      ADN37493 standard; protein; 171 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Brinkman AM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   87.3%;
                                                                                                            87.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26-FEB-2003; 2003WO-US005918.
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                                                                                                                                                                                                                                                                                                                                                 17-JUN-2004 (first entry)
                                                                                            Query Match
Best Local Similarity 7/...
7: Conservative
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                                                                                                                                                                                                       139 IETWILRHP 147
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                                                                                                                                                                         1 VETWFLRHP 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Apt D, Punnonen J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Dengue virus type 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (MAXY-) MAXYGEN INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2004-043106/04
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es 7; Conserv
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                                                                             Sequence 167 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 171 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO2003102166-A2
                                                                                                                                                                                                                                                                                                                                                                                                                               capsid; DEN-2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11-DEC-2003
                                                                                                                                                                                                                                                                                                                     ADN37493;
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The invention relates to a novel recombinant or synthetic polypeptide comprising an amino acid sequence that has at least about 90% sequence identity to any of the 20 fully defined amino acid sequences given in the specification. The polypeptide of the invention demonstrates virucide activity and may be useful for inducing an immune response to Plaviviruses (arboviruses group B), including Dengue viruses, as well as in detecting and/or diagnosing the presence of antibodies against the Dengue virus serctypes in a sample and for gene therapy. The current sequence is that of a Dengue virus C15/truncated prM antigen fusion protein of the invention which comprises the C-terminal 15 amino acids of the capsid protein fused to a truncated form of the protein last to a truncated form of the prim protein last the capsid protein acids of the prim protein acids of the prim protein last the C-terminal 15 amino acids of the prim protein lacking
                                                                                                                                                                                                                                                                                                                                                                                                                                                       New recombinant or synthetic polypeptides and polynucleotides useful for diagnosing, preventing or treating diseases associated with flaviviruses, including dengue viruses.
                                                                                                                                                        virucide; Flavivirus; arboviruses group B; gene therapy; truncated prM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                          Dengue virus C15/truncated prM antigen fusion protein - SEQ ID 121.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Fusion protein PD30 contains Dengue virus epitope.
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Pred. No. 1.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Disclosure; SEQ ID NO 121; 409pp; English.
                               ADN37496 standard; protein; 171 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAW75410 standard; peptide; 635 AA.
                                                                                                                                                                                                                                                                                                                                                                                             Brinkman AM,
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(revised)
(first entry)
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                                                                                                                                                                                                                                                                                                                                                                                             Punnonen J,
                                                                                                                                                                                                                                                                                                                                                            (MAXY-) MAXYGEN INC.
                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2004-043106/04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
tes 7; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 VETWFLRHP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 171 AA;
                                                                                                                                                                                                                                      WO2003102166-A2.
                                                                                                                                                                                                       Dengue virus.
                                                                                           17-JUN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            02-MAR-1999
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                                                              ADN37496;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                           Apt D,
                                                                                                                                                                          capsid.
RESULT 12
ADN37496
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:||| |||| 143 IETWILRHP 151

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New recombinant or synthetic polypeptides and polynucleotides useful for diagnosing, preventing or treating diseases associated with flaviviruses, including dengue viruses.
                                                                                                                                                                                                                             Example 28; SEQ ID NO 253; 409pp; English.
                                                                        Brinkman AM
     26-FEB-2002; 2002US-0360030P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           26-FEB-2003; 2003WO-US005918.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        including dengue viruses.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
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139 IETWILRHP 147
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                                                                                                     WPI; 2004-043106/04.
N-PSDB; ADN37632.
                                                                        Punnonen J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2004-043106/04.
                                      (MAXY-) MAXYGEN INC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
les 7; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 VETWFLRHP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   envelope, capsid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 675 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO2003102166-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Dengue virus.
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                                                                        Apt D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
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                                                                                                                                                                                                                                                                                                               Vazquez Ramudo S, Guzman Tirado G, Guillen Nieto GE, Pardo Lazo OL, Chinea Santiago G, Perez Diaz AB, Pupo Antunez M, Redriguez Roche R, Reyes Accosta O, Garay Perez HE, Padron Palomares G, Alvarez Vera M; Morier Diaz L, Perez Insuita O, Pelegrino Martinez De La Coterri Pedro,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This protein represents a fusion protein comprising an M protein epitope from Dengue virus type 2 inserted into the P64K protein from Neisseria meningitidis. Synthetic peptides based on the Dengue virus epitope sequences (AAW75404-W75408) and fusion proteins can be used to raise antibodies. The peptides, protein and antibodies are all useful for diagnosis and treatment of Plavivirus infection, e.g. in vaccines. (Updated on 25-WAR-2003 to correct PI field.) (Updated on 17-OCT-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                                                      New peptide(s) and fusion proteins useful for diagnosis and treatment of flavivirus infection - contain cross-reactive epitopes from Dengue virus pre-M/M protein and can induce neutralising antibodies.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Dengue virus C15/prM/E part codon-optimised antigen fusion protein 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
Dengue virus, fusion protein, P64K; Neisseria meningitidis, epitope;
antibody; diagnosis, Flavivirus, infection, vaccine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            virucide; Flavivirus; arboviruses group B; gene therapy; C15/prM/E; human codon-optimised; prM; envelope; capsid.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         87.3%; Score 48; DB 2; Length 635; 77.8%; Pred. No. 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1; Indels
                                                                                                                                                                                                                                                            CIGB CENT ING GENETICA & BIOTECNOLOGIA. IPK INST MEDICINA TROPICAL KOURI PEDRO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 7; Page 28-29; 64pp; Spanish
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADN37628 standard; protein; 675 AA.
                                                                                                                                                                                          98WO-CU000001
                                                                                                                                                                                                                           97CU-0000013
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity 77.8
                                                  Dengue virus.
Neisseria meningitidis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 VETWFLRHP 9
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74 IETWILRHP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 635 AA;
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                                                                                                                     WO9831814-A1
                                                                                                                                                                                          13-JAN-1998;
                                                                                                                                                                                                                             15-JAN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Dengue virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11-DEC-2003.
                                                                                                                                                      23-JUL-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic
                                                                                     Chimeric.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADN37628;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                              (CIGB-)
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The invention relates to a novel recombinant or synthetic polypeptide comprising an amino acid sequence that has at least about 90% sequence identity to any of the 20 fully defined amino acid sequences given in the specification. The polypeptide of the invention demonstrates virucide activity and may be useful for inducing an immune response to Plaviviruses (arboviruses group B), including Dengue viruses, as well as in deciring an experience of antibodies against the Dengue virus serotypes in a sample and for gene therapy. The current sequence is that of the Dengue virus (SIS/prM/E partially human codonoptimised antigen fusion protein of the invention which comprises 15 codonoptimised prM protein and envelope (E) protein.
                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New recombinant or synthetic polypeptides and polynucleotides useful for diagnosing, preventing or treating diseases associated with flaviviruses,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           virucide; Flavivirus; arboviruses group B; gene therapy; C15/prM/E; prM;
                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                              ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Dengue virus C15/prM/E antigen fusion protein - SEQ ID 143
                                                                                                                                                                                                                                                                                                                 87.3%; Score 48; DB 8; Length 675; 77.8%; Pred. No. 6.4; 1; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 40; SEQ ID NO 143; 409pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADN37518 standard; protein; 675 AA
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Gaps

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Length 675; 1; Indels

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Score 48; DB 8 Pred. No. 6.4; 1; Mismatches

87.3%; 77.8%;

Query Match 87.3 Best Local Similarity 77.8 Matches 7; Conservative

:||| |||| 139 IETWILRHP 147

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1 VETWFLRHP

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RESULT 17

ADN3762

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The invention relates to a novel recombinant or synthetic polypeptide comprising an amino acid sequence that has at least about 90% sequence identity to any of the 20 fully defined amino acid sequences given in the specification. The polypeptide of the invention demonstrates virucide activity and may be useful for inducing an immune response to plaviviruses (abpoviruses group B), including Dengue viruses, as well as in detecting and/or diagnosing the presence of antibodies against the Dengue virus serviypes in a sample and for gene therapy. The current esquence is that of the Dengue virus c15/prm/E antigen fusion protein of the invention which comprises 15 amino acids of the capaid (c) protein fused to the full-length prM protein and envelope (E) protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New recombinant or synthetic polypeptides and polynucleotides useful for diagnosing, preventing or treating diseases associated with flaviviruses, including dengue viruses.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        virucide; Flavivirus; arboviruses group B; gene therapy; C15/prM/E; prM;
                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Dengue virus C15/prM/E antigen fusion protein - SEQ ID 237.
                                                                                                                                                                                                               Length 675;
                                                                                                                                                                                                                                            1; Indels
                                                                                                                                                                                                                8;
                                                                                                                                                                                                                Score 48; DB E
Pred. No. 6.4;
1; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                        ADN37612 standard; protein; 675 AA.
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                                                                                                                                                                                                                87.3%;
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                                                                                                                                                                                                                                                                                                                                                                                                                               17-JUN-2004 (first entry)
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Best Local Similarity 77.8
Matches 7; Conservative
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139 IETWILRHP 147
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                                                                                                                                                                                                                                                                       1 VETWFLRHP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        envelope; capsid
                                                                                                                                                                                     Sequence 675 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO2003102166-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Dengue virus
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                                                                                                                                                                                                                                                                                                                                                                                                    ADN37612;
                                                                                                                                                                                                                                                                                                                                               RESULT 16
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New recombinant or synthetic polypeptides and polynucleotides useful for diagnosing, preventing or treating diseases associated with flaviviruses,
                                                                                            Dengue virus C15/prM/E part codon-optimised antigen fusion protein 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                           virucide; Flavivirus; arboviruses group B; gene therapy; C15/prM/E; human codon-optimised; prM; envelope; capsid.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 48; DB 8; Length 675;
Pred. No. 6.4;
1; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 40; SEQ ID NO 251; 409pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAW75411 standard; peptide; 677 AA.
                                                                                                                                                                                                                                                                                                                                                                                          Brinkman AM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 87.3%;
77.8%;
                                                                                                                                                                                                                                                                                         26-FEB-2003; 2003WO-US005918.
                                                                                                                                                                                                                                                                                                                          26-FEB-2002; 2002US-0360030P.
                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 77...
77. Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       diagnosing, preventing or including dengue viruses.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   :||| ||||
139 IETWILRHP 147
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                                                                                                                                                                                                                                                                                                                                                        (MAXY-) MAXYGEN INC
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                                                                                                                                                                                                                                                                                                                                                                                                                                         N-PSDB; ADN37630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 675 AA;
                                                                                                                                                                                                                           WO2003102166-A2
                                                                                                                                                                            Dengue virus.
Synthetic.
                                                           17-JUN-2004
                                                                                                                                                                                                                                                           11-DEC-2003.
                              ADN37626;
                                                                                                                                                                                                                                                                                                                                                                                          Apt D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 18
AAW75411
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The invention relates to a novel recombinant or synthetic polypeptide comprising an amino acid sequence that has at least about 90% sequence identity to any of the 20 fully defined amino acid sequences given in the specification. The polypeptide of the invention demonstrates virucide activity and may be useful for inducing an immune response to altavirintess (arboviruses group B), including Demogue viruses, as well as in detecting and/or diagnosing the presence of antibodies against the Demogue virus serotypes in a sample and for gene therapy. The current the invention which comprises 15 amino acids of the capsid (C) protein of tused to the full-length prM protein and envelope (B) protein.

Sequence 675 AA;

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The invention relates to a novel recombinant or synthetic polypeptide comprising an amino acid sequence that has at least about 90% sequence identity to any of the 20 fully defined amino acid sequences given in the specification. The polypeptide of the invention demonstrates virucide activity and may be useful for inducing an immune response to plaviviruses (arboviruses group B), including Dengue viruses, as well as in detecting and/or diagnosing the presence of antibodies against the Dengue virus serotypes in a sample and for gene therapy. The current sequence is that of the Dengue virus c15/prm/E antigen fusion protein of the invention which comprises 15 amino acids of the cappaid (C) protein fused to the full-length prM protein and envelope (E) protein.
                                                                                                                                                                                                                                                                                                                        New recombinant or synthetic polypeptides and polynucleotides useful for diagnosing, preventing or treating diseases associated with flaviviruses including dengue viruses.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   virucide; Flavivirus; arboviruses group B; gene therapy; DEN-2;
Den-2C15/prM/E; prM; envelope; capsid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        87.3%; Score 48; DB 8; Length 677; 77.8%; Pred. No. 6.4; 1; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Dengue virus type 2 Den-2C15/prM/E antigen fusion protein.
                                                                                                                                                                                                                                                                                                                                                                                                         Example 13; SEQ ID NO 238; 409pp; English.
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                                                                                                                                                                                                                                            Punnonen J, Brinkman AM,
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                                                                                                                                                             26-FEB-2002; 2002US-0360030P.
                                                                                                                  26-FEB-2003; 2003WO-US005918.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity 77.8
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                                                                                                                                                                                                   (MAXY-) MAXYGEN INC
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                                        WO2003102166-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 677 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO2003102166-A2.
Dengue virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17-JUN-2004
                                                                              11-DEC-2003
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Vazquez Ramudo S, Guzman Tirado G, Guillen Nieto GE, Pardo Lazo OL;
Chinas Bantiago G, Perez Diaz AB, Pupo Antunez M, Rodriguez Roche R;
Reyes Acosta O, Garay Perez HE, Padron Palomares G, Alvarez Vera M;
Morier Diaz L, Perez Insuita O, Pelegrino Martinez De La Coterri Pedro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This protein represents a fusion protein comprising an M protein epitope from Dengue virus type 4 inserted into the P64K protein from Neisseria meningitidis. Synthetic peptides based on the Dengue virus epitope sequences (AAM75404-W75408) and fusion proteins can be used to raise antibodies. The peptides, protein and antibodies are all useful for diagnosis and treatment of Flavivirus infection, e.g. in vaccines. (Updated on 25-MAR-2003 to correct PI field.) (Updated on 17-OCT-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New peptide(s) and fusion proteins useful for diagnosis and treatment of flavivirus infection - contain cross-reactive epitopes from Dengue virus pre-M/M protein and can induce neutralising antibodies.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           virucide; Flavivirus; arboviruses group B; gene therapy; C15/prM/E; prM; envelope; capsid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                            Dengue virus, fusion protein, P64K; Neisseria meningitidis, epitope, antibody; diagnosis, Flavivirus, infection, vaccine.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Dengue virus C15/prM/E antigen fusion protein - SEQ ID 238.
                                                                                                                                      Fusion protein PD34 contains Dengue virus epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (CIGB-) CIGB CENT ING GENETICA & BIOTECNOLOGIA.
(IPKM-) IPK INST MEDICINA TROPICAL KOURI PEDRO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 7; Page 30-32; 64pp; Spanish.
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                                                                                                                                                                                                                                                                                                                                                                                                         98WO-CU000001
                                                                                                                                                                                                                                                                                                                                                                                                                                                97CU-00000013
                                                                              (revised)
(first entry)
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Best Local Similarity 77.6
                                                                                                                                                                                                                                                               Neisseria meningitidis
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116 IETWILRHP 124
                                                         (revised)
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                                                                                                                                                                                                                                                                                                                                                                                                                                             15-JAN-1997;
                                                                                                                                                                                                                                       Dengue virus
                                                                                                                                                                                                                                                                                                                        WO9831814-A1
                                                                                                                                                                                                                                                                                                                                                                                                       13-JAN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            17-JUN-2004
                                                       17-0CT-2003
                                                                        25-MAR-2003
02-MAR-1999
                                                                                                                                                                                                                                                                                                                                                               23-JUL-1998
                 AAW75411;
                                                                                                                                                                                                                                                                                  Chimeric.
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RESULT 19 ADN37613

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Gaps

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1; Indels

6.4;

Score 48; DB 8 Pred. No. 6.4; 1; Mismatches

87.3%;

8; Length 681;

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The invention relates to a novel recombinant or synthetic polypeptide comprising an amino acid sequence that has at least about 90% sequence identity to any of the 20 fully defined amino acid sequences given in the specification. The polypeptide of the invention demonstrates virucide activity and may be useful for inducing an immune response to Flaviviruses (arboviruses group B). Including Dengue viruses, as well as in detecting and/or diagnosing the presence of antibodies against the
                                                                                                                               protein.
                                                                                                                                                                                                                                                                                                                                                     11-DEC-2003.
                                                                                                                                                                                                                                                        ADN37517;
                                                                                                                                                            Query Match
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ADN37517
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Dengue virus serotypes in a sample and for gene therapy. The current sequence is that of the Dengue virus C15/prM/E antigen fusion protein of the invention which comprises 15 amino acids of the capsid (C) protein fused to the full-length prM protein and envelope (E) protein.
                                                                                                                                                                                                                  Similarity 77.8
7; Conservative
                                                                                                                                                                                                                                                                                                                                                         143 IETWILRHP 151
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                                                                                                                                                                                                                                                                                                       1 VETWFLRHP
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                                                                                                                                         Sequence 681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        07-FEB-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            17-OCT-2002,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Chimeric.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chang GJ;
                                                                                                                                                                                               Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABP57874;
                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ABP5787
           8 X C C C C C
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                                                                                                                                                                                      The invention relates to a novel recombinant or synthetic polypeptide comprising an amino acid sequence that has at least about 90% sequence identity to any of the 20 fully defined amino acid sequences given in the specification. The polypeptide of the invention demonstrates virucide activity and may be useful for inducing an immune response to Plaviviruses (arboviruses group B), including Dengue viruses, as well as in detecting and/or diagnosing the presence of antibodies against the Dengue virus serotypes in a sample and for gene therapy. The current sequence is that of the Dengue Virus type 2 (DEN.2) Den.2C15/prw//E antigen fusion protein of the invention which comprises 15 amino acids of the capsid (C) protein fused to the full-length prM protein and envelope
  New recombinant or synthetic polypeptides and polynucleotides useful for diagnosing, preventing or treating diseases associated with flaviviruses, including dengue viruses.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New recombinant or synthetic polypeptides and polypucleotides useful for diagnosing, preventing or treating diseases associated with flaviviruses including dengue viruses.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    virucide; Flavivirus; arboviruses group B; gene therapy; C15/prM/E; prM;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Dengue virus C15/prM/E antigen fusion protein - SEQ ID 142.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 48; DB 8; Length 681;
Pred. No. 6.4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1; Mismatches
                                                                                                                                         Claim 38; SEQ ID NO 228; 409pp; English
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  87.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   26-FEB-2003; 2003WO-US005918.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               17-JUN-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   143 IETWILRHP 151
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (MAXY-) MAXYGEN INC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 681 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO2003102166-A2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The invention relates to a novel nucleic acid comprising a transcriptional unit encoding a signal sequence of a structural protein of a first flavivirus and an immunogenic flavivirus antigen of a second flavivirus, where the transcriptional unit directs the synthesis of the antigen. The polymucleotide of the invention has virucide activity, and acts as a vaccine. A composition of the invention is useful for immunising a subject against infection by a flavivirus. The polymucleotide is useful as a vaccine for preventing flavivirus infection. The sequence represents plasmid pCBD2-14-6, which contains dengue-2 virus (DEN-2) prM and E proteins
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                                                                                                                                                                                                                                                                                                                    Flavivirus; immunogenic flavivirus antigen; virucide; vaccine; prM-E;
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77.8%; Pred. No. 6.5;
ive 1; Mismatches 1; Indels
                                                                                                                                                                                                                                            Plasmid pCBD2-14-6 containing dengue-2 virus prM and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Example 20; Page 157-158; 174pp; English.
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ABP57874 standard; protein; 685 AA.
                                                                                                                                                                                                                                                                                                                                                          pCBD2-14-6; dengue virus; DEN-2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        04-APR-2002; 2002WO-US010764.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        04-APR-2001; 2001US-00826115.
                                                                                                                                                            (first entry)
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Best Local Similarity 77.0.
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                                      NAME OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PR
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infection, comprises transcriptional unit encoding signal sequence of one flavivirus and immunogenic flavivirus antigen of a second flavivirus.
                                                                                                                                                                                                                                                                                                                                                                                     The invention relates to a novel nucleic acid comprising a transcriptional unit encoding a signal sequence of a structural protein of a first flavivirus and an immunogenic flavivirus antigen of a second flavivirus, where the transcriptional unit directs the synthesis of the antigen. The polymucleotide of the invention has virucide activity, and acts as a vaccine. A composition of the invention is useful for immunishing a subject against infection by a flavivirus. The polymucleotide is useful as a vaccine for preventing flavivirus infection. The sequence represents plasmid pCB9D2-IJ-4-3, which contains dengue-2 virus (DEN-2) prM, M and E, and Japanese encephalitis virus E
                                                                                                                                                                                                                                                                                                     Novel isolated nucleic acid useful as vaccine for preventing flavivirus
  Flavivirus; immunogenic flavivirus antigen; virucide; vaccine; prM-E; pCB9D2-IJ-4-3; Japanese encephalitis virus; dengue-2 virus; DEN-2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEN-2; flavivirus; envelope protein; immunisation; vaccine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 48; DB 6; Length 685;
Pred. No. 6.5;
1; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Dengue virus serotype 2 PR159/S1 polypeptide.
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                                                                                                                                                                                                 (USSH ) US DEPT HEALTH & HUMAN SERVICES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /label= Pre-membrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAW09409 standard; protein; 1127 AA.
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/label= Membrane
281. .775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          l. .114
/label= Capsid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          87.3%;
                                                                                                                                            04-APR-2002; 2002WO-US010764
                                                                                                                                                                        04-APR-2001; 2001US-00826115.
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(first entry)
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Best Local Similarity 77.0
Tr Conservative
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147 IETWILRHP 155
                                                                                                                                                                                                                                                          WPI; 2003-058572/05.
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                                                                                                                                                                                                                                                                         N-PSDB; ABV77548.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 685 AA;
                                                                                   WO200281754-A1
                                           Unidentified
                                                                                                                 17-OCT-2002
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19-MAY-1997
                                                           Synthetic
                                                                                                                                                                                                                               Chang GJ;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       proteins
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Region
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Novel isolated nucleic acid useful as vaccine for preventing flavivirus infection, comprises transcriptional unit encoding signal sequence of one flavivirus and immunogenic flavivirus antigen of a second flavivirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention relates to a novel nucleic acid comprising a transcriptional unit encoding a signal sequence of a structural protein of a first flavivirus and an immunogenic flavivirus antigen of a second flavivirus, where the transcriptional unit directs the synthesis of the antigen. The polymucleotide of the invention has virucide activity, and acts as a vaccine. A composition of the invention is useful for immunising a subject against infection by a flavivirus. The polymucleotide is useful as a vaccine for preventing flavivirus infection. The sequence represents plasmid pcBBD2-20-29-1, which contains dengue-2 virus (DEN-2) prM, M and E, and Japanese encephalitis
                                                                                                                                                                                 Flavivirus, immunogenic flavivirus antigen; virucide; vaccine; prM-E; pCB8D2-2J-2-9-1; Japanese encephalitis virus; dengue-2 virus; DEN-2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 48; DB 6; Length 685;
Pred. No. 6.5;
1; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Example 20; Page 168-169; 174pp; English
                                                                                                                                                      Plasmid pCB8D2-2J-2-9-1 protein product.
                                                                                                                                                                                                                                                                                                                                                                                       (USSH ) US DEPT HEALTH & HUMAN SERVICES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Plasmid pCB9D2-IJ-4-3 protein product.
                                                                   ABP57876 standard; protein; 685 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ABP57875 standard; protein; 685 AA.
                                                                                                                                                                                                                                                                                                                                04-APR-2002; 2002WO-US010764.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                87.3%;
77.8%;
                                                                                                                                                                                                                                                                                                                                                            04-APR-2001; 2001US-00826115.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Query Match
Best Local Similarity 77.00,
                                                                                                                           (first entry)
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 147 IETWILRHP 155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         :||| ||||
147 IETWILRHP 155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 VETWFLRHP 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2003-058572/05.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              N-PSDB; ABV77549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          virus E proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 685 AA;
                                                                                                                                                                                                                                                                      RO200281754-A1
                                                                                                                                                                                                                             Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  07-FEB-2003
                                                                                                                           07-FEB-2003
                                                                                                                                                                                                                                                                                                  17-OCT-2002
                                                                                                                                                                                                                                           Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                   Chang GJ;
                                                                                               ABP57876;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ABP57875;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 23
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Gaps

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Protein
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ô
                                                                                                                                                                                                                                                                                                                     A polypeptide (AAW09409) comprises the capsid, pre-membrane, envelope and NS1 proteins of dengue virus serotype 2 (DEN-2) variant PR159/S1. A conservative mutation in the envelope protein may be involved in the attenuation of this small-plaque, temp. sensitive variant. Portions of the envelope protein, esp. domain B, can be expressed in eukaryotic hosts (see also AAW09410 and AAW0942-28) transfected with vectors incorporating DEN-2 S1 cDNA (see also AAT47666). These polypeptides can be useful insertion, to raise antibodies useful for passive immunisation, and for diagnosis of infection. (Updated on 17-OCT-2003 to standardise OS field)
                             /note= "amino acid residue 588 (Val) is Ile in wild-type
PRIS9"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                            Sub:unit vaccine against flavivirus infection - contg. recombinant envelope protein in secretable form, used for immunising against flavivirus infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Dengue virus serotype 2 PR159/S1 viral capsid, pprM, E, NS1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Flavivirus; envelope protein; vaccine; infection; diagnosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      87.3%; Score 48; DB 2; Length 1127; 77.8%; Pred. No. 11; 11; Indels ive 1; Mismatches 1; Indels
                                                                                                                                                                                         (HAWA-) HAWAII BIOTECHNOLOGY GROUP INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAY05522 standard; protein; 1127 AA
                                                                                                                                                                                                                                                                                                      Example 1; Fig 3A-D; 121pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
          296. .395
/label= Domain-B
'label= Envelope

    .114
    /label= Capsid
    .205

                                                                                                                                                                                                             Nakano E, Clements D;
                                                                                                                               96WO-US007627.
                                                                                                                                                  95US-00448734.
                                                                                                                                                           95US-00488807.
95US-00500469.
                                                          776. .1127
/label= NS1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Dengue virus; serotype 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  237 IETWILRHP 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 VETWFLRHP 9
                                                                                                                                                                                                                                 WPI; 1997-020938/02.
N-PSDB; AAT47666.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 1127 AA;
                             Misc-difference
                                                                                                                                                             07-JUN-1995;
10-JUL-1995;
                                                                                       WO9637221-A1
                                                                                                                             24-MAY-1996;
                                                                                                                                                  24-MAY-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          17-OCT-2003
05-JUL-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAY05522;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                              IVY JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Protein
                                                           Region
          Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 26
AAY05522
ID AAX05
XX
AC AAY05
XX
DT 17-OC
DT 05-JU
XX
XX
KW Flavi
XX
KW Flavi
XX
KW Flavi
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This sequence is composed of the capsid, prM, envelope (E) and NS1
proteins of serotype 2 dengue virus DEN-2 strain PR159/61. A vaccine for
protecting against flavivirus infection comprises a dimeric 80% E protein
that has been secreted as a recombinant protein from a eukaryotic cell.
80% E indicates a C-terminally truncated flavivirus E protein. The
dimeric truncated E is formed: (1) by directly linking 2 tandem copies of
dimeric truncated E is formed: (1) by directly linking 2 tandem copies of
commain through the homodimeric association of 2 leucine zipper helices
cach fused to the C-terminus of an 80% E molecule; or (3) via the
commain of a non-covalently associated four-helix bundle domain formed
upon association of two helix-turn-helix moieties attached to the C-
terminus of an 80% E molecule. Dimeric truncated DEN-2 E proteins are
efficiently secreted by recombinant cells, are easier to purify than
intracellular proteins, and generally applicable to flaviviruses, in
cappose. The method is generally applicable to flaviviruses, in
cappose the method is generally applicable to flaviviruses amino
codids 1-395 of DEN-2 E. The products can also be used for diagnosis of
infection. (Updated on 17-OCT-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Recombinant dimeric flaviviral envelope vaccine - comprising a dimeric 80%E protein, useful for protecting against flavivirus, especially dengue virus infections.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Dengue virus; DEN-2; Envelope protein; 80% E; membrane protein; capaid protein; NS1 protein; Dengue haemorrhagic fever; DHF; Dengue shock syndrome; DSS; flavivirus; vaccine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Dengue virus, DEN-2, capsid/membrane/envelope/NS1 proteins.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mcdonnell M, Harada KE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (HAWA-) HAWAII BIOTECHNOLOGY GROUP INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Dengue virus type 2; strain PR159/S1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADL98086 standard; protein; 1127 AA.
/label= PreMembrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Example 1; Fig 3A-D; 60pp; English.
                              206. .280
/label= Membrane
                                                                                                       280. .1127
/label= Envelope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Coller BG,
                                                                                                                                                                                                                                                                                                                                                                    98WO-US015447.
                                                                                                                                                                                                                                                                                                                                                                                                                                         97US-00904227.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 87.3
Best Local Similarity 77.8
Matches 7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            :||| ||||
237 IETWILRHP 245
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           [vy JM, Peters ID,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 1999-153454/13
N-PSDB; AAX25114.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 1127 AA;
                                                                                                                                                                                                                                                                                                                                                                    27-JUL-1998;
                                                                                                                                                                                                                      WO9906068-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                         31-JUL-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18-NOV-2004
                                                                                                                                                                                                                                                                                       11-FEB-1999.
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Harada K;

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The invention describes a vaccine that generates a protective,

neutralising antibody response to a Flavivirus in a murine host. The

neutralising antibody response to a Flavivirus in a murine host. The

vaccine comprises a therapeutic amount of a dineric 80%E, the dimeric

80%E having been secreted as a recombinantly produced protein from

Drosophila Schneider cells, and where 80%E represents the N-terminal 80%

Drotion of the protein from residues 1-395. Also described are: an

immunogenic polypeptide comprising the dimeric 80%E cited above; an

immunogenic composition that generates a protective, neutralising

antibody response to a Flavivirus in a murine host, comprising the above

immunogenic polypeptide and a physiological carrier; a multivalent

immunogenic polypeptide of Flavivirus, comprising the above

immunogenic for the detection of Flavivirus, comprising at least 2

of the above immunogenic polypeptides of at least 2 flaviviral serotypes;

cof the above immunogenic or multivalent immunodiagnostic

cof the above immunosentic with dimeric 80%E, and

labeled antibodies immunoreactive to antibodies from the test subject.

Che composition is useful for preventing or diagnosing infections caused

by dengue virus. This is the amino acid sequence of the polyprotein

encoded by Dergue virus gene virus apsen viral capsid, prM, E and NSI genes for

bengue virus strain PRIS9/SI used as the source of EBN-2 genes for the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New vaccines for preventing or diagnosing infections caused by dengue virus comprises a therapeutic amount of a dimeric 80%E protein secreted from Drosophila Schneider cells.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Attenuation; growth; vaccine; infection; Dengue virus type 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 48; DB 8; Length 1127;
Pred. No. 11;
1; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Dengue virus type 2 strain rDEN2/4delta30 protein.
                                                                                                                                                                                                                                                                                                                                  Peters ID, Coller BG, Mcdonell M, Ivy JM,
                                                                                                                                                                                                                                                                           HAWA-) HAWAII BIOTECHNOLOGY GROUP INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Example 1; SEQ ID NO 3; 47pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAE35314 standard; protein; 3388 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 87.38;
                                                                                                                                                                   99US-00376463
                                                                                                                                                                                                                          97US-00904227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity 77.8
Matches 7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            237 IETWILRHP 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 VETWFLRHP 9
                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2004-438725/41.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 1127 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                  N-PSDB; ADQ28715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200295075-A1
     Dengue virus.
                                                         US6749857-B1.
                                                                                                                                                                                                                          31-JUL-1997;
                                                                                                                                                                   .8-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Dengue virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    28-MAY-2003
                                                                                                                15-JUN-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28-NOV-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAE35314;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 29
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  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The invention relates to a vaccine for protection against Flavivirus infection comprising a dimeric 80% envelope (B), which has been secreted as a recombinantly produced protein from Drosophila Schneider cells and which represents the N-terminal 60% portion of the protein from residue 1-395. Also included are a method for protecting a subject against a Flavivirus, an immunogenic polypeptide comprising a dimeric 80% E, an immunogenic polypeptide and a carrier, an immunodiagnostic for detecting Flavivirus comprising the immunogenic polypeptide and a carrier, an immunodiagnostic for detecting Flavivirus comprising the immunogenic polypeptide and an immunodiagnostic kit for detecting Flavivirus in a test subject. The dimeric 80% E products are envelope proteins of serotypes comprising DEN-1, DEN-2, DEN-3 or DEN-4. The proteins is a dengue virus. The 80% E products are envelope proteins of serotypes comprising DEN-1, DEN-2, DEN-3 or DEN-4. The proteins of serotypes comprising DEN-1, DEN-2, DEN-3 or DEN-4. The proteins of serotypes comprising DEN-1, DEN-2, DEN-3 or DEN-4. The incorporating a helix-turn-helix peptide, to encourage dimerisation. The vaccine is useful for protection against dengue virus infection (e.g. Dengue haemorrhagic fever, DHF, and Dengue shock syndrome, DEN-2 errore and pengue haemorrhagic fever, DHF, and Dengue shock syndrome, DEN-2 errore and pengue haemorrhagic fever, DHF, and pengue shock syndrome, DEN-2 errore and pengue haemorrhagic fever succeed by the partial genomic sequence of the DEN-2 errore and pengue the partial genomic sequence of the DEN-2 errore and pengue page the partial genomic sequence of the DEN-2 errore and pengue the partial genomic sequence of the DEN-2 errore and pengue page the partial genomic sequence of the DEN-2 errore and pengue page pengue page pengue page pengue page pengue page pengue page pengue page pengue page pengue page pengue page pengue page pengue page pengue page pengue page pengue page pengue page pengue page pengue page pengue page pengue pengue pengue
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Vaccine useful for protection against dengue virus infection, comprises a dimeric 80% envelope, which has been secreted as a recombinantly produced protein from Drosophila Schneider cells.
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IVY J M.
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                                                                                                                                                                                                                                                                                                                         The present invention relates to novel mutated flaviviruses comprising a phenotype in which the viral genome is modified by introduction of a mutation, singly or in combination, taken from mutations from recombinant virus bearing Vero adaptation mutations, putative Vero cell adaptation mutations of dengue type 4 virus (DEM4) or mutations whown to attenuate dengue type 4 virus. The methods and compositions of the invention are useful for fine tuning the attenuation and growth characteristics of dengue virus vaccines for the prevention and/or treatment of dengue virus robenz/4delta30 protein
                                                                                                                                                                                                                        New mutated flavivirus, useful for fine tuning the attenuation and growth characteristics of dengue virus vaccines for the prevention and/or treatment of dengue virus infection.
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Pred. No. 36;
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/label= NS1
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Detection and identification of Flaviviridae in biological sample - by amplifying consensus sequence then hybridisation opt. followed by typing, e.g. sequencing amplified prod.
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/label= NS4B
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Maximum Match 100%
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Maximum DB seq length: 200000000
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DNA-directed DNA p tumor suppressor p genome polyprotein genome polyprotein genome polyprotein nifm protein - Kle hypothetical prote carboxypeptidase-1 conserved hypothet probable transport glycoprotein gpv - hypothetical prote probable receptor Bplicing factor PR lipoate-protein liprobable tumor sup hypothetical prote glycoprotein D pre glycoprotein D pre acceylornithine decoxyribodipyrimid Ecos type I restri interleukin-10 rec hypothetical prote antibiotic synthet hypothetical prote rudimentary protei hypothetical protei LysR family regula hypothetical oxido aryl-alcohol dehyd aryl-alcohol dehyd aryl-cheto reductas conserved hypothet nitrite reductase nitrite reductase hypothetical prote EcoA system protei hypothetical prote hypothetical prote hypothetical prote hypothetical prote tRNA delta-2-isope hypothetical prote probable tetraacyl hypothetical prote hypothetical prote hypothetical prote DNA gyrase subunit hypothetical prote oxysterol-binding PBSX prophage ORF hypothetical prote hypothetical prote conserved hypothet hypothetical prote conserved hypothet phosphinothricin N glycinin G5 precur probable RING zinc ATP-dependent heli phosphoadenosine p conserved hypothet hypothetical prote helicase, SNF2 fam dynein heavy chain conserved hypothet conserved hypothet conserved hypothet GNWVY GNWVYP S02510 C95872 T149934 F72389 T35722 VGBE14 B32935 A38442 G84711 VGBEIB S35784 H69588 E83062 141293 A41293 A47367 T47395 T12532 S34670 A83146 G84140 B97315 B897315 G801705 G91706 G91292 C91292 C91292 FWSYG3 T90139 G87268 T41490 T40135 AC3240 D83435 D83435 T33341 H72291 B87657 G72291 AF0656 H70223 AG2878 S49184 AG0923 F98323 AH2959

ALIGNMENTS

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A, Readdues: 1-555 <SH1>
A, Cross-references: UNIPROT: P29984; UNIPARC: UPI0000131DF8; GB: D10514; DDBJ: D01074; NID: G
A, Cross-references: UNIPROT: P29984; UNIPARC: UPI0000131DF8; GB: D10514; DDBJ: D01074; NID: G
C, Superfamily: hepatitis C virus genome polyprotein
C, Keywords: envelope protein; glycoprotein; nonstructural protein; polyprotein; transment
F; 1-49, Froduct: membrane associated protein M (fragment) #status predicted <MEM>
F; 37-53/Domain: transmembrane #status predicted <TMV>
F; 50-544/Product: envelope protein E #status predicted <TMV>
F; 546-512/Domain: transmembrane #status predicted <TMX>
F; 555-555/Product: nonstructural protein NGI (fragment) #status predicted <NON>
F; 545-555/Product: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            genome polyprotein - dengue virus type 2 (strain TH-36) (fragment)
N;Contains: envelope protein E; membrane-associated protein M; nonstructural protein NS1
C;Species: dengue virus type 2
C;Species: dengue virus type 2
C;Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 31-bec-2004
C;Accession: JQ1404
R;Shiu, S.Y.W.; Jiang, W.R.; Porterfield, J.S.; Gould, E.A.
J. Gen. Virol. 73, 207-212, 1992
A;Title: Envelope protein sequences of dengue virus isolates TH-36 and TH-Sman, and iden A;Reference number: JQ1404; MUID:92113574; PMID:1339466
                                                                                                                                                                                                                                                                                               A;Molecule type: mRNA
Kseidues: 1-166 <SHI:>
A;Cross-references: UNIPROT:Q66346; UNIPARC:UP100000F6DD9; EMBL:X72849; NID:g437772; PID
C;Superfamily: hepatitis C virus genome polyprotein
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R;Ruiz, B.H.; Sanchez, I.; Ortega, G.J.; Lopez, I.; Ortiz-Ortiz, L.
submitted to GenBank, October 1992
A;Description: Nucleotide sequence and deduced amino-acid sequence of the structural A;Reference number: A48644
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polyprotein - dengue virus type 2 (strain Mexican) (fragment)
C;Species: dengue virus type 2
C;Species: dengue virus type 2
C;Date: Appr-1994 #sequence_revision 07-Apr-1994 #text_change 31-Dec-2004
C;Accession: A48644
R;Ruiz, B.H.; Sanchez, I.; Ortega, G.J.; Lopez, I.; Ortiz-Ortiz, L.
                                               Species: dengue virus type 2
Date: 06-Jan-1995 #sequence revision 06-Jan-1995 #text_change 31-Dec-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
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Pred. No. 1.2;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1; Indels
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                                                                                                         C;Accession: $40144
R;Shiu, S.Y.W.
submitted to the EMBL Data Library, May 1993
A;Reference number: $40144
A;Accession: $40144
premembrane protein - denque virus type 2
C;Species: dengue virus type 2
C;Date: 06-Jan-1995 #sequence_revision 06-
C;Accesion: 540144
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illarity 77.8%;
Conservative
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Best Local Similarity 77.8
Matches 7; Conservative
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6 IETWILRHP 14
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tes 7; Conserv
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A,Accession: A29972
A,Molecule type: genomic RNA
A,Rocession: A29972
A,Molecule type: genomic RNA
A,Rocession: A29972
A,Molecule type: genomic RNA
A,Rosaldues: 1-3388 - MAH>
A,Rosaldues: 1-3388 - MAH>
A,Cross-references: UNIPARC:UPI0000131DFB; GB:M19197; NID:g323654; PIDN:AAA42962.1; PIDI:
C,Superfamily: hepatitis C virus genome polyprotein
C,Keywords: ATP; capsid protein; genome polyprotein
F,2-114,Product: membrane protein #status predicted <AMP>
F;115-280/Product: membrane protein #status predicted <MMP>
F;20-280/Product: membrane protein #status predicted <BNP>
F;20-280/Product: monstructural protein NS1 #status predicted <NS1>
F;118-1346-1475/Product: nonstructural protein NS2 #status predicted <NS2>
F;1346-1475/Product: nonstructural protein NS2 #status predicted <NS2>
F;1476-2090/Product: nonstructural protein NS2 #status predicted <NS3>
F;168-1675/Region: nucleotide-binding motif A (P-loop)
F;175-1760/Region: nucleotide-binding motif A (P-loop)
F;175-1760/Region: nucleotide-binding motif A (P-loop)
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F;2307-2488/Product: nonstructural protein NS4b #status predicted <N4B>
F;2489-3488/Product: nonstructural protein NS5 #status predicted <NS5>
F;183,347,433,905,982,1134,1174,1329,1369,2298,2302,2384,2454,2482,2641,2662,2701,2711/B)
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N/Contains: capsid protein C; envelope protein E; membrane-associated protein M; nonstructural protein NS44; nonstructural protein NS5
C;Species: dengue virus type 2
C;Species: dengue virus type 2
C;Date: 31-Dec-1992 #sequence revision 31-Dec-1992 #text_change 31-Dec-2004
C;Accession: A42451; A43496; A43763
R;Blok, J; McWilliam, S,M; Butler, H.C.; Gibbs, A.J.; Weiller, G.; Herring, B.L.; Hems)
A;Title: Comparison of a dengue-2 virus and its candidate vaccine derivative: sequence re
A;Reference number: A42451; MUID:92188532; PMID:1312269
                                 A,Molecule type: genomic RNA
A,Residues: 1-775 < RUI>
A,Cross-references: UNIPROT:Q66398; UNIPARC:UPI00000EEE45; GB:L04561; NID:g323652; PIDN:/
C,Superfamily: hepatitis C virus genome polyprotein
C,Superfamily: hepatitis C virus genome polyprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      genome polyprotein - dengue virus type 2 (atrain PR159/S1)
N;Contains: capsid protein; envelope protein; membrane protein; nonstructural protein NS1
a; nonstructural protein NS4b; nonstructural protein NS5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C;Species; dengue virus type 2.
C;Date: 30-Jun-1989 #text_change 31-Dec-2004
C;Accession: A29972
C;Accession: A29972; Hunkapiller, T.; Dalrymple, J.M.; Strauss, J.H.; Strauss, E.G. Virology 162, 167-180, 1988
A;Title: Nucleotide sequence of dengue 2 RNA and comparison of the encoded proteins with A;Reference number: A29972; MUID:88101365; PMID:2827375
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77.8%; Pred. No. 7.6;
ive 1; Mismatches 1; Indels
                                                                                                                                                                                                                                                                    Length 775
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Pred. No. 1.7;
1; Mismatches 1
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77.8%;
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Best Local Similarity 77.8
Matches 7, Conservative
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237 IETWILRHP 245
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237 IETWILRHP 245
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Matches 7; Conserv
A;Status: preliminary
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a
                               nucleotide-binding motif
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Best Local Similarity 77.8
Matches 7; Conservative
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Best Local Similarity 77.8
Matches 7; Conservative
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A;Molecule type: genomic RNA
A;Residues: 1-791 <DE1>
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237 IETWILRHP 245
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A; Residues: 1-3391 <BLO.
A; Residues: 1-3391 <BLO.
A; Residues: 1-3391 <BLO.
A; Cross = references: UNIPROT: P2990; UNIPARC: UPI0000131DF5; GB:M84727; GB:M85259; NID:g32 C; Superfamily: hepatitis C virus genome polyprotein
C; Keywords: ATP; capsid protein; envelope protein; glycoprotein; nonstructural protein; C; Keywords: ATP; capsid protein; C #status predicted <CPC.
F;115-205/Domain: nonterminal signal sequence #status predicted <MPP.
F;115-206/Domain: nonterminal signal sequence #status predicted <MPP.
F;206-280/Product: membrane-associated protein M #status predicted <MPM.
F;286-284/Domain: transmembrane #status predicted <TM1.
F;286-284/Domain: transmembrane #status predicted <TM2.
F;281-775/Product: envelope protein E #status predicted <NS2.
F;727-743/Domain: transmembrane #status predicted <TM2.
F;727-773/Domain: transmembrane #status predicted <TM3.
F;777-773/Domain: transmembrane protein NS1 #status predicted <NS2.
F;118-1345/Product: nonstructural protein NS2 #status predicted <NS2.
F;118-1345/Product: nonstructural protein NS2 #status predicted <NS3.
F;1476-2004/Product: nonstructural protein NS3 #status predicted <NS3.
F;1476-127/Product: nonstructural protein NS3 #status predicted <NS3.
F;1476-127/Product: nonstructural protein NS2 #status predicted <NS3.
F;1476-127/Product: nonstructural protein NS2 #status predicted <NS3.
F;1568-1675/Region: nucleotide-binding motif A (P-loop)
F;1759-176/Region: nucleotide-binding motif A (P-loop)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gamwich polyprotein - dengue virus type 2 (strain 16681-PDK53)

Gamwich polyprotein - dengue virus type 2 (strain 16681-PDK53)

Nicontains: capsid protein C; envelope protein E; membrane-associated protein NS5

C.Species: dengue virus type 2

C.Species: dengue virus type 2

C.Species: dengue virus type 2

C.Species: dengue virus type 2

C.Species: dengue virus type 2

C.Species: 31-Dec-1992 #sext_change 31-Dec-2004

C.Species: 31-Dec-1992 #sequence_revision 31-Dec-1992 #text_change 31-Dec-2004

C.Species: dengue virus subtler, H.C.; Gibbs, A.J.; Weiller, G.; Herring, B.L.; Hems

Virology 187, 573-590, 1992

A.Tible: Comparation of a dengue-2 virus and its candidate vaccine derivative: sequence r. A.Reference number: A4435; MUID:92188532; PMID:131269

A.Rocession: A4445; MUID:92188532; PMID:131269

A.Rocession: A4445; MUID:92188532; PMID:131269

A.Rocession: A4445; MUID:92188532; PMID:131269

A.Rocession: A4445; MUID:92188532; PMID:131269

A.Rocession: A4445; MUID:92188532; PMID:131269

A.Rocession: A4445; MUID:92188532; PMID:131269

A.Rocession: A4445; MUID:92188532; PMID:131269

A.Rocession: A4445; MUID:92188532; PMID:131269

A.Rocession: A4445; MUID:92188532; PMID:131269

A.Rocession: A4445; MUID:92188532; PMID:131269

A.Rocession: A4445; MUID:92188532; PMID:131269

A.Rocession: A4445; MUID:9218867; MUID:921885299

C.Superfamily: hepatitis C virus genome polyprocein, glycoprotein, nonstructural protein M #status predicted <PMP.

F.115-280/Porduct: membrane-associated protein M #status predicted <AM9.

F.115-284/Domain: transmembrane #status predicted <PMP.

F.115-414/Pooduct: monstructural protein NS1 #status predicted <AM9.

F.115-4144/Poomain: transmembrane #status predicted <AM9.

F.115-4144/Poomain: transmembrane #status predicted <AM9.

F.115-4144/Product: monstructural protein NS2 #status predicted <AM9.

F.1164-1144/Product: monstructural protein NS2 #status predicted <AM9.

F.1164-1144/Product: monstructural protein NS2 #status predicted <AM9.

F.1164-1144/Product: monstructural protein MS2 #status pr
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F;2244-2491/Product: nonstructural protein NS4b #status predicted <N4B>
F;2492-3391/Product: nonstructural protein NS5 #status predicted <NS5>
F;183,347,433/Binding site: carbohydrate (Asn) (covalent) #status predicted
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1; Mismatches
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Best Local Similarity 77.00
77.00
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237 IETWILRHP 245
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F;2492-3391/Product: nonstructural protein NS5 #status predicted <NS5>
F;183,347,433;905,982,1134,1174,1329,2301,2305,2346,2387,2457,2485,2644,2665,2704,2714/Bı
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N;Contains: capsid protein C; envelope protein E; membrane-associated protein M; nonstruc
tural protein NS4a; nonstructural protein NS4b; nonstructural protein NS5
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A; CCOSS-references: UNIPROT:P07564; UNIPARC:UPI00001710BB; GB:M15975

R; Deubel, V.; Kinney, R.M.; Trent, D.W.
Virology 165, 234-244, 1988

A; Title: Nucleotide sequence and deduced amino acid sequence of the nonstructural protein A; Reference number: A94378; MUID:88265864; PMID:338970

A; Reference number: A94378; MUID:88265864; PMID:338970

A; Recession: A94378

A; Molecule type: Genomic RNA
A; Residues: 792-3391 Genomic RNA
A; Residues: 792-3391 Genomic RNA
A; Residues: 792-3391 Genomic RNA
A; Residues: 792-3391 Genomic RNA
A; Residues: 792-3391 Genomic RNA
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A; Residues: 792-3391 Genomic RNA
A; Residues: 792-3391 Genomic RNA
A; Residues: 792-3391 Genomic Residue predicted CFNA
C; Keywords: AFP; Capsid protein C #status predicted CFNA
F; 115-280/ Product: membrane-associated protein M #status predicted Genomic RF; 266-284/ Domain: transmembrane #status predicted CFNA
F; 266-284/ Domain: transmembrane #status predicted CFNA
F; 268-284/ Domain: transmembrane #status predicted CFNA
F; 775-773/ Domain: transmembrane #status predicted CFNA
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F; 775-773/ Domain: transmembrane #status predicted CFNA
F; 775-773/ Domain: mucleotide-binding motif A (P-10op)
F; 775-775/ Domain: mucleotide-binding motif A (P-10op)
F; 775-775/ Domain: prod
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C;Date: 30-Sep-1989 #sequence_revision 30-Sep-1989 #text_change 31-Dec-2004
C;Date: 30-Sep-1989 #sequence_revision 30-Sep-1989 #text_change 31-Dec-2004
R;Deubel, V.; Kinney, R.M.; Trent, D.W.
Virology 155, 365-377, 1986
A;Title: Nucleotide sequence and deduced amino acid sequence of the structural proteins
A;Reference number: A94346; MUID:87071658; PMID:3024394
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F1759-1762/Region: DEAH motif
F1209-1762/Region: DEAH motif
F1209-2243/Product: nonstructural protein NS4a #status predicted <N4A>
F12148-2164/Domain: transmembrane #status predicted <TMD>
F12174-2130/Domain: transmembrane #status predicted <TMD>
F1227-2243/Domain: transmembrane #status predicted <TMP>
F1227-2243/Domain: transmembrane #status predicted <TMF>
F1227-2243/Domain: transmembrane #status predicted <NMF>
F12411-2427/Domain: transmembrane #status predicted <TMG>
F12411-2427/Domain: transmembrane #status predicted <TMG>
F12492-3391/Product: nonstructural protein NS5 #status predicted <NS5>
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Pred. No. 7.6;
1; Mismatches 1; Indels
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Pred. No. 7.6;
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A;Reference number: JQ1404; MUID:92113574; PMID:1339466
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A,Accession: A47311
A,Status: preliminary
A,Molecule type: mucleic acid
A,Residues: 1-775 <DES>
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Best Local Similarity
Matches 8; Conserv
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Matches
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F;2380-2491/Product: nonstructural protein NS4B #status predicted <NB>
F;2380-2491/Product: nonstructural protein NS5 #status experimental <NS5>
F;8492-3391/Product: nonstructural protein NS5 #status experimental <NS5>
F;85,962,2305,2457,2704/Binding site: carbohydrate (Asn) (covalent) #status experim F;347,433,1134,1174,2301,2485,2665,2714/Binding site: carbohydrate (Asn) (covalent) #sta
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N;Contains: envelope protein E; membrane-associated protein M; nonstructural protein NS1
C;Species dengue virus type 1
C;Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 31-Dec-2004
C;Accession: JQ1405
E;Shiu, S:Y.W.; Jang, W.R.; Porterfield, J.S.; Gould, E.A.
J. Gen. Virol. 73, 207-212, 1992
A;Title: Envelope protein sequences of dengue virus isolates TH-36 and TH-Sman, and iden
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Pred. No. 7.6;
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77.8%;
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Best Local Similarity 77.0
7; Conservative
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                                  VETWFLRHP
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A,Accession: J01405
A,Molecule type: genomic RNA
A,Residues: 1-55s <8Hz>
A,Rosidues: 1-55s <8Hz>
A,Rosidues: 1-55s <8Hz>
A,Rosidues: 1-55s <8Hz>
A,Rosidues: 1-55s <8Hz>
A,Cross-references: UNIPROT: P29983; UNIPARC: UPI0000131DF0; GB:D10513; DDBJ:D01073; NID:gi
C,Superfamily: hepatitis C virus genome polyprotein
C,Keywords: envelope protein; glycoprotein; nonstructural protein; polyprotein; transmembrane-associated protein M (fragment) #status predicted <MEM>
F;31-53/Domain: transmembrane #status predicted <HMI>
F;50-544/Product: envelope protein E #status predicted <HN2>
F;526-542/Domain: transmembrane #status predicted <HM3>
F;526-542/Domain: transmembrane #status predicted <HM3>
F;526-542/Domain: transmembrane #status predicted <HM3>
F;545-555/Product: nonstructural protein NS1 (fragment) #status predicted <NON>
F;116,202,521/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Diypotein(C, E, M, prM) - dengue virus type 1 (fragment)
C;Species: dengue virus type 1
C;Species: dengue virus type 1
C;Daccession: A47311
R;Despres, P.; Frenkiel, M.P.; Deubel, V.
Virology 196, 209-219, 1993
A;Title: Differences between cell membrane fusion activities of two dengue type-1 isolate
A;Reference number: A47311; MUID:93362407; PMID:8356794
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N;Contains: capsid protein C; envelope protein E; membrane-associated protein M; nonstruc C;Species: dengue virus type 1
C;Species: dengue virus type 1
C;Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 31-Dec-2004
C;Accession: C32401
R;Chu, M.C; O'Rourke, E.J; Trent, D.W.
A;Chu, M.C; O'Rourke, E.J; Trent, D.W.
A;Title: Genetic relatedness among structural protein genes of dengue 1 virus strains.
A;Reference number: A32401; MUID: 89293078; PMID: 2738579
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A;Molecule type: genomic RNA
A;Rosidues: 1-792 <CHU>
A;Rosidues: 1-792 <CHU>
A;Cross-references: UNIPARC:UPI000017854F; GB:D00501
C;Superfamily: hepatitis C virus genome polyprotein
C;Keywords: capsid protein; envelope protein; glycoprotein; nonstructural protein; polyps
F;1-114/Product: capsid protein C flstatus predicted <CPC>
F;46-67/Domain: transmembrane #status predicted <TML>
F;46-67/Domain: transmembrane #status predicted <TML>
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C;Superfamily: hepatitis C virus genome polyprotein
C;Keywords: polyprotein
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88.9%; Pred. No. 2.6;
ive 0; Mismatches 1; Indels
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Pred. No. 1.8;
0; Mismatches 1; Indels
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A;Cross-references: UNIPROT:P27913; UNIPARC:UP1000017854D; GB:D00501
C;Superfamily: hepatitis C virus genome polyprotein
C;Superfamily: hepatitis C virus genome polyprotein
C;Superfamily: hepatitis C virus genome polyprotein
C;Superfamily: hepatitis C virus genome polyprotein
C;Superfamily: hepatitis C virus genome polyprotein
C;Superfamily: hepatitis C virus genome polyprotein
C;Superfamily: hepatitis C virus
C;114,Product: capsid protein C #status predicted <PM2>
C;102-118,Domain: transmembrane #status predicted <PM2>
C;115-205,Domain: nonterminal signal sequence #status predicted <MP>
C;115-205,Domain: nonterminal signal sequence #status predicted <MP>
C;206-280/Product: membrane-associated protein M #status predicted <MP>
C;244-263/Domain: transmembrane #status predicted <PM3>
C;261-281/Domain: transmembrane #status predicted <PM3>
C;267-373/Domain: transmembrane #status predicted <PM6>
C;715-713/Domain: transmembrane #status predicted <PM6>
C;755-773/Domain: transmembrane #status predicted <PM6>
C;755-773/Domain: transmembrane #status predicted <PM6>
C;755-773/Domain: transmembrane #status predicted <PM6>
C;755-773/Domain: transmembrane #status predicted <PM6>
C;755-773/Domain: transmembrane #status predicted <PM6>
C;755-773/Domain: transmembrane #status predicted <PM6>
C;755-773/Domain: transmembrane #status predicted <PM6>
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C;755-773/Domain: transmembrane #status predicted <PM6>
C;755-773/Domain: transmembrane #status predicted <PM6>
C;755-773/Domain: transmembrane #status predicted <PM6>
C;755-773/Domain: transmembrane #status predicted <PM6>
C;755-773/Domain: transmembrane #status predicted <PM6>
C;755-773/Domain: transmembrane *pm6
C;755-773/Domain: transmembrane *pm6
C;755-773/Domain: transmembrane *pm6
C;755-773/Domain: trans
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Kontains: capsid protein C; envelope protein B; membrane-associated protein M; nonstruc
C;Species: dengue virus type 1
C;Date: 31-Mar-1990 #sequence_revision 31-Mar-1990 #text_change 31-Dec-2004
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R;Mason, P.W.; McAda, P.C.; Mason, T.L.; Fournier, M.J.
Virology 161, 262-267, 1987
A;Title: Sequence of the dangue-1 virus genome in the region encoding the three structure A;Reference number: A27032; MUID:88044504; PMID:3672932
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A/Molecule type: genomic RNA
A/Rolecule type: genomic RNA
A/Rolecule type: genomic RNAS>
A/Cross-references: UNIPROT.P17763, UNIPARC:UP10000131DF1; GB:M23027; NID:g511850; PIDN:J
C/Superfamily: hepatitis C virus genome polyprotein
C/Superfamily: hepatitis C virus genome polyprotein
C/ROWORGS: capsid protein; envelope protein; glycoprotein; nonstructural protein; nuclec
C/ROWORGS: capsid protein C #status predicted <CPC>
F/12-114/Product: capsid protein C #status predicted <CPC>
F/13-15/Domain: transmembrane #status predicted <TM2>
F/10-117/Domain: transmembrane associated protein M precursor #status predicted <MPP>
F/115-205/Domain: nonterminal signal sequence #status predicted <SIG>
F/106-280/Product: membrane-associated protein M #status predicted <MPM>
F/106-280/Product: membrane-associated protein M #status predicted <MPM>
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N;Contains: capsid protein; envelope protein; membrane protein; nonstructural protein NS3
a; nonstructural protein NS4b; nonstructural protein NS5
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Fi281-775/Product: envelope protein E #status predicted <ERE>
Fi384-391/Region: nucleotide-binding motif A (P-1000)
Fi384-391/Region: nucleotide-binding motif A (P-1000)
Fi727-743/Domain: transmembrane #status predicted <TM5>
Fi777-773/Domain: transmembrane #status predicted <TM5>
Fi777-773/Product: nonstructural protein NSI #status predicted <NSI>
Fi1128-1226/Product: nonstructural protein NS2 (fragment) #status predicted <NSA>
Fi1128-1226/Product: nonstructural protein NS2 (fragment) #status predicted <NSA>
Fi188-3347,433,905,982,1190/Binding site: carbohydrate (Asn) (covalent) #status predicted
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Pred. No. 2.6;
0; Mismatches 1; Indels
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Pred. No. 4.1;
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88.94;
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88.9%;
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Best Local Similarity 88.9
Matches 8; Conservative
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Best Local Similarity 88.9
Matches 8; Conservative
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GNWVWP
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C;Superfamily: hepatitis C virus genome polyprotein
C;Keywords: capsid protein; envelope protein; glycoprotein; nonstructural protein; polyp
F;1-114/Product: capsid protein C #status predicted <CPC>
F;46-67/Domain: transmembrane #status predicted <TM1>
F;102-118/Domain: transmembrane #status predicted <TM1>
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N;Contains: capsid protein C; envelope protein E; membrane-associated protein M; nonstru
C;Species: dengue virus type 1
C;Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 31-Dec-2004
C;Accession: A32401
C;Accession: A32401
J Gen. Virol. 50.; Noruke, E.J.; Trent, D.W.
J Gen. Virol. 70, 1701-1712, 1989
A;Title: Genetic relatedness among structural protein genes of dengue 1 virus strains.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       genome polyprotein - dengue virus type 1 (strain AHF 82-80) (fragment)
N. Contains: capsid protein C; envelope protein E; membrane-associated protein M; nonstru
C;Species: dengue virus type 1
C;Date: 30-Sep_1993 #sequence_revision 30-Sep-1993 #text_change 31-Dec-2004
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R;Chu, M.C.; O'Rourke, E.J.; Trent, D.W.
J. Gen. Virol. 70, 1701-1712, 1989
A;Title: Genetic relatedness among structural protein genes of dengue 1 virus strains. A;Reference number: A32401; MUID:89293078; PMID:2738579
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F;115-280/Product: membrane-associated protein M precursor #status predicted <MMP>
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                                 Fil5-205/Domain: nonterminal signal sequence #status predicted <81G>
Fi206-280/Product: membrane-associated protein M #status predicted <MPM>
Fi206-280/Product: ransmembrane #status predicted <TM3>
Fi206-281/Domain: transmembrane #status predicted <TM3>
Fi206-281/Domain: transmembrane #status predicted <TM3>
Fi201-775/Product: envelope protein E #status predicted <FPE>
Fi715-735/Domain: transmembrane #status predicted <TM3>
Fi75-737/Domain: transmembrane #status predicted <TM3>
Fi75-773/Domain: transmembrane #status predicted <TM5>
Fi75-773/Domain: transmembrane #status predicted <NM3>
Fi76-792/Product: nonstructural protein NS1 (fragment) #status predicted <NM Fi183,347,433/Binding site: carbohydrate (Asn) (covalent) #status predicted
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Pred. No. 2.6;
0; Mismatches 1; Indels
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F:266-281/Domain: transmembrane #status predicted <TW4>
F:281-775/Product: envelope protein E #status predicted <TW5>
F:715-735/Domain: transmembrane #status predicted <TW5>
F:755-773/Domain: transmembrane #status predicted <TW5>
F:755-773/Domain: transmembrane #status predicted <TW6>
F:776-792/Product: nonstructural protein NG1 (fragment) #statu
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Matches 8; Conservative
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A, Molecule type: genomic RNA
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B32401
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nucleotide-binding motif A (P-loop) nucleotide-binding motif B
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Best Local Similarity 88.9
Matches 8; Conservative
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237 METWILRHP 245
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Ny Contains: capsid protein; envelope protein; membrane protein; nonstructural protein NS
a; nonstructural protein NS4b; nonstructural protein NS5
c; Species: dengue virus type 1
C; Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 31-Dec-2004
C; Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 31-Dec-2004
C; Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 31-Dec-2004
C; Accession: A4251
Nyicology 188, 953-958, 1992
A; Title: Full-length cDNA sequence of dengue type 1 virus (Singapore strain S275/90).
A; Title: Full-length cDNA sequence of dengue type 1 virus (Singapore strain S275/90).
A; Reference number: A4251; MUID:92263809; PMID:158563
A; Molecule type: genomic RNA
A; Residues: 1-3396 *FUJA
A; Cross-references: UNIPROT: P33478; UNIPARC: UP1000002F845; GB: M87512
C; Superfamily: hepatitis C virus genome polyprotein, glycoprotein; nonstructural protein, F; 115-204 /Ponduct: membrane protein #status predicted *MEN-F; 115-204 /Ponduct: membrane protein #status predicted *NNA-F; 125-704 /Domain: transmembrane #status predicted *TM2-F; 265-279 /Domain: transmembrane #status predicted *TM3-F; 125-127 /Product: monstructural protein NS2a #status predicted *NS3-F; 118-134 /Product: nonstructural protein NS2a #status predicted *NS3-F; 118-134 /Product: nonstructural protein NS2a #status predicted *NS3-F; 118-134 /Product: nonstructural protein NS3 #status predicted *NS3-F; 1474-Product: nonstructural protein NS3 #status predicted *NS3-F; 1475-2093/Product: nonstructural protein NS3 #status predicted *NS3-F; 1474-Product: nonstructural protein NS3 #status predicted *NS3-F; 1475-2093/Product: nonstructural protein NS3 #status predicted *NS3-F; 1474-Product: nonstructural protein NS3 #status predicted *NS3-F; 1475-2093/Product: nonstructural protein NS3 #status predicted *NS3-F; 1474-Product: nonstructural protein NS3 #status predicted *NS3-F; 1474-Product: nonstructural protein NS3 #status predicted *NS3-F; 1474-
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A/Keanudes: 1-399 (2029)
A/Keanudes: 1-399 (2029)
A/Keanudes: 1-399 (2029)
A/Keanudes: 1-399 (2029)
C/Superfamily: hepatitis C virus genome polyprotein
C/Superfamily: hepatitis C virus genome polyprotein
C/Superfamily: hepatitis C virus genome polyprotein
C/Superfamily: hepatitis C virus genome polyprotein;
F/11-4/Product: capsid protein #status predicted <ADA>
F/14-114/Product: membrane protein precursor #status predicted <MEP>
F/15-208/Product: membrane protein #status predicted <MEM>
F/16-208/Product: membrane protein #status predicted <MEM>
F/16-208/Product: membrane protein #status predicted <MEM>
F/206-208/Product: membrane protein #status predicted <ADA>
F/206-208/Product: membrane #status predicted <ADA>
F/206-208/Product: nonstructural protein NS1 #status predicted <NS1>
F/24-746/Domain: transmembrane #status predicted <TMO>
F/24-746/Domain: transmembrane #status predicted <TMO>
F/24-1184/Product: nonstructural protein NS2 #status predicted <NS2>
F/14-1184/Product: nonstructural protein NS2 #status predicted <NS3>
F/14-1147/Product: nonstructural protein NS3 #status predicted <NS3>
F/14-1147/Product: nonstructural protein NS3 #status predicted <NS3>
F/166-1167/Region: nucleotide-binding motif B
F/175-1759/Region: nucleotide-binding motif B
F/175-1759/Region: nucleotide-binding motif B
F/175-1759/Product: nonstructural protein NS4 #status predicted <NS5>
F/2490/Product: nonstructural protein NS4 #status predicted <NS5>
F/2490/Product: nonstructural protein NS5 #status predicted <NS5>
F/2490/Product: nonstructural protein NS5 #status predicted <NS5>
F/2491-3390/Product: nonstructural protein NS5 #status predicted <NS5>
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F/2491-3390/
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    C;Species: dengue virus type 3
C;Date: 30-301-1992 #sequence_revision 30-Jun-1992 #text_change 31-Dec-2004
C;Accession: A4774
R;Osatomi, K.; Sumiyoshi, H.
ViroLogy 176, 643-647, 1990
A;Title: Complete nucleotide sequence of dengue type 3 virus genome RNA.
A;Reference number: A34774; MUID:90266483; PMID:2345967
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88.9%; Pred. No. 11;
tive 0; Mismatches 1; Indels
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Best Local Similarity 88.5
Matches 8; Conservative
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A;Residues: 1-3390 <OSA>
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A; Reference number: JG1007
A; Residues 1.775 < CANA
A; Residues 1.775 < CANA
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A; Residues 1.775 < CANA
A; Residues 1.775 < CANA
A; Residues 1.775 < CANA
A; Reference number: JG1005
A; Richese J. Microbiol. Immunol. 11, 9-12, 1991
A; Ritle: Nucleotide and encoded amino acid sequences of the nonstructural protein NS1 ger
A; Ritle: Nucleotide and encoded amino acid sequences of the nonstructural protein NS1 ger
A; Reference number: JG1005
A; Rocession: JG1005
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A; Rocession: Lansmembrane #status predicted < CAP
F; JG15-280/Product: membrane-associated protein M precursor
F; JG10-Agonain: transmembrane #status predicted < CAP
F; JG10-Agonain: transmembrane #status predicted < CAP
F; JG10-Agonain: transmembrane #status predicted < CAP
F; JG10-Agonain: transmembrane #status predicted < CAP
F; JG10-Agonain: transmembrane #status predicted < CAP
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F; JG10-Agonain: transmemb
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N;Contains: capsid protein C; envelope protein E; membrane-associated protein M; nonstruc
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C;Date: 31-Dec-1992 #sequence_revision 31-Dec-1992 #text_change 31-Dec-2004
C;Accession: JC1007; JC1005
R;Yang, P.Y.; Lam, S.K.
Chinese J. Microbiol. Immunol. 11, 341-344, 1991
A;Title: The nucleotide and encoded amino acid sequences of the structural protein gene
F;1755-1760/Region: nucleotide-binding motif B
F;1759-1762/Region: DEAH motif
F;2094-2243/Product: nonstructural protein NS4a #status predicted <N4A>
F;2244-2492/Product: nonstructural protein NS4b #status predicted <N4B>
F;2493-3396/Product: nonstructural protein NS5 #status predicted <NS5>
F;2493-3396/Product: nonstructural protein NS5 #status predicted <NS5>
F;183,347,433/Binding site: carbohydrate (Asn) (covalent) #status predicted
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C;Species: dengue virus type 2
C;Date: 12-Feb-1993 #sequence_revision 12-Feb-1993 #text_change 31-Dec-2004
C;Accession: S092.3
R;Samuel, S.; Koh, C.L.; Pang, T.; Lam, S.K.
Nucleic Acids Res. 18, 1905, 1990
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Pred. No. 5.5;
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Pred. No. 11;
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74.5%;
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Best Local Similarity 66.7%;
Matches 6; Conservative
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Best Local Similarity 75.0
Matches 6; Conservative
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A; Residues: 1-166 <SAM>
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123 IEIWILRHP 131
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                          1 VETWFLRHP
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A; Residues: 1-422 <STO>
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ETWFFRYP
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                                                                                                                                                                                                                                                        C; Accession: S09224
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Accession: A83184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Gene: PA3706
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              genome polyprotein - dengue virus type 2 (strain PUO-218) (fragment)
N.Containhas: envelope protein B; membrane-associated protein M; nonstructural protein NS1
C;Species: dengue virus type 2
C;Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 31-Dec-2004
C;Accession: BS0043
R;Gruenberg, A.; Woo, W.S.; Biedrzycka, A.; Wright, P.J.
                                                                                                                                     UNIPARC: UPI00000F3200; EMBL:X51713; NID:g59309; PIDN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          R;Samuel, S.; Koh, C.L.; Pang, T.; Lam, S.K.
Nucleic Acids Res. 18, 1905, 1990
A;Title: Nucleotide and encoded amino acid sequences of the membrane protein precursor
A; Title: Nucleotide and encoded amino acid sequences of the membrane protein precursor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         fitle: Partial nucleotide sequence and deduced amino acid sequence of the structural Reference number: PS0043; MUID:88258474; PMID:3385407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A) Residues: 1-665 <GRU>
A) Cross-references: UNIPROT:P18356; UNIPARC:UPI0000178550
C) Comment: The RNA sequence was obtained from the DDBJ, release 5.0.
C) Superfamily: hepatitis C virus genome polyprotein
C) Superfamily: hepatitis C virus genome polyprotein
C) Keywords: envelope protein; glycoprotein; membrane protein; nonstructural protein;
F;1-91/Domain: signal sequence #stetus predicted <SIGS >
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C;Species: dengue virus type 2
C;Date: 12-Feb-1993 #sequence_revision 12-Feb-1993 #text_change 31-Dec-2004
C;Accession: S09225
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167-661/Product: membrane-associated protein M #status predicted <BEP>
1662-665/Product: envelope protein E #status predicted <BEP>
1662-665/Product: nonstructural protein NS1 (fragment) #status predicted <br/>
169,233,319/Binding site: carbohydrate (Asn) (covalent) #status predicted
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                                                                                                                                                                                                                                Length 166;
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Pred. No. 16;
1; Mismatches 2; Indels
                                                                                                                                                                                                                                                                              1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    membrane protein - dengue virus type 2 (strain M3) (fragment)
                   agic fever, dengue shock syndrome or dengue fever. A;Reference number: 809223; MUID:90245599; PMID:2336374 A;Accession: 809225
                                                                                                                                                                                                                              Score 45; DB 2;
Pred. No. 1.2;
2; Mismatches
                                                                                                                                                                                                                           81.8%;
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Similarity 66.7%;
6; Conservative
                                                                                                                                                                                                                                                   Best Local Similarity 66.7
Matches 6; Conservative
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123 IDTWILRHP 131
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123 IQTWILRHP 131
                                                                                                                                                                                                                                                                                                                         1 VETWFLRHP 9
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Best Local Similarity
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Best Local Similarity
Matches 6; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A, Residues: 1-166 <SAM>
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                                                                                                                                                                                                                                Query Match
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Fisamuel, S.; Koh, C.L.; Pang, T.; Lam, S.K.

Nucleic Acids Res. 18, 1905, 1990

A,Tille: Nucleotide and encoded amino acid sequences of the membrane protein precursor ar agic fever, dengue shock syndrome or dengue fever.

A,Reference number: 809223; MUID:90245599; PMID:2336374
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C;Date: 15-Sep-2000 #sequence_revision 15-Sep-2000 #text_change 09-Jul-2004
C;Accession: A83184
C;Accession: A83184
C;Accession: A83184
A;Stover, C.K.; Pham, X.Q.; Erwin, A.L.; Mizoguchi, S.D.; Warrener, P.; Hickey, M.J.; Bri adman, S.; Yuan, Y.; Brody, L.L.; Coulter, S.N.; Folger, K.R.; Kas, A.; Larbig, K.; Lim, J. Lory, S.; Olson, M.V.
J. Lory, S.; Olson, M.V.
Nature 406, 959-964, 2000
A;Title: Complete genome sequence of Pseudomonas aeruginosa PA01, an opportunistic pathoc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A, Residues: 1-166 <SAM>
A, Residues: 1-166 <SAM>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Cross-references: UNIPROT:O9HXT5; UNIPARC:UPI0000C5ACD; GB:AE004789; GB:AE004091; NID:
A;Experimental source: strain PAO1
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membrane protein - dengue virus type 2 (strain M2) (fragment)
C;Species: dengue virus type 2
C;Date: 12-Feb-1993 #sequence_revision 12-Feb-1993 #text_change 31-Dec-2004
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C.Date: 16-Feb-2001 #sequence_revision 16-Feb-2001 #text_change 09-Jul-2004
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Pred. No. 5.8;
1; Mismatches
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1; Mismatches
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probable sugar ABC transporter permease protein SMb20318 [imported] - Sinorhizobium melilot C;Species: Sinorhizobium meliloti C;Species: Sinorhizobium meliloti C;Species: Sinorhizobium meliloti C;Species: Sinorhizobium meliloti C;Species: Sinorhizobium meliloti C;Species: Sinorhizobium meliloti C;Species: Sinorhizobium meliloti C;Spacession: H95879
R;Finan, T.M.; Weidner, S.; Wong, K.; Buhrmester, J.; Chain, P.; Vorholter, F.J.; Hernanc Proc. Natl. Acad. Sci. US.A. 98, 9889-9894, 2001
A;Title: The complete sequence of the 1,683-kb pSymB megaplasmid from the N2-fixing endos A;Feference number: A95842; MUID:21396508; PMID:11481431
A;Accession: H95879
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-343 <KUR>
A;Residues: 1-343 <KUR>
A;Residues: UNIPROT:092WM8; UNIPARC:UPI00000CB4A7; GB:AL591985; PIDN:CAC48704.1;
A;Residues: 1-343 <KUR>
A;Experimental source: strain 1021, megaplasmid pSymB
B;Gallbert, F.; Finan, T.M.; Long, S.R.; Puhler, A.; Abola, P.; Ampe, F.; Barloy-Hubler, plan, D.; Chain, P.; Cowie, A.; Davis, R.W.; Dreano, S.; Rederspiel, N.A.; Fisher, R.F.;
b.; Hyman, R.W.; Jones, T.
Ccience 293, 668-672, 2001
A;Authors: Kahn, D.; Kahn, M.L.; Kalman, S.; Keating, D.H.; Kiss, E.; Komp, C.; Lelaure, A;Authors: Rahn, D.; Walchors: F.Y.; Weidner, S.; Weller, S.; Weller, S.; Weller, C.; Lelaure, A;Attle: The composite genome of the legume symbiont Sinorhizobium meliloti.
A;Attle: The composite genome of the legume symbiont Sinorhizobium meliloti.
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C;Species: Rattus norvegicus (Norway rat)
C;Species: Rattus norvegicus (Norway rat)
C;Date: 27-Mar-1992 #sequence_revision 10-Apr-1992 #text_change 24-Jun-1993
C;Accession: BA0098
R;Fearon, E.R.; Cho, K.R.; Nigro, J.M.; Kern, S.E.; Simons, J.W.; Ruppert, J.M.; Hamiltor Science 247, 49-56, 1990
A;Title: Identification of a chromosome 18q gene that is altered in colorectal cancers. A;Reference number: A40098; MUID:90100559; PMID:2294591
A;Accession: B40098
A;Accession: Preliminary
A;Molecule type: DNA
A;Residues: 1-144 <FEA>
                                   A,Residues: 1-205 <BLAT>
A,COSB-references: UNIPARC:UPI000013B429; GB:AE000468; GB:U00096; NID:g1790374; PIDN:AAC
A,Experimental source: strain K-12, substrain MG1655
C;Genetics:
A,Gene: yijf
C;Superfamily: Escherichia coli hypothetical 23.0K protein b3944
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C;Superfamily: 1-arabinose transport system permease araH
                                                                                                                                                                                                                                  Score 39; DB 2; Pred. No. 16; 1; Mismatches
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Best Local Similarity 75.0%;
Matches 6; Conservative
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Best Local Similarity 83.3.
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125 LETWFSRH 132
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24 WFIRHP 29
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A;Gene: SMb20318
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      hypothetical 23.0K protein b3944 - Escherichia coli (strain K-12)
N;Alternate names: hypothetical protein F205
N;Alternate names: hypothetical protein F205
C;Species: Bacherichia coli
C;Species: Bacherichia coli
C;Accession: I78665; C65201
C;Accession: I78665; C65201
R;Blattner, F.R.; Burland, V.; Plunkett III, G.; Sofia, H.J.; Daniels, D.L.
Nucleic Acids Res. 21, 5408-5417, 1993
A;Title: Analysis of the Escherichia coli genome. IV. DNA sequence of the region from 89
A;Reference number: I58303; MUID:94089392; PMID:8265357
A;Reference number: A85480; MUID:21074935; PMID:11206551
A;Accession: E86085
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-205 <STO>
A;Cross=references: UNIPROT:Q8X763; UNIPARC:UPIO0001659BC; GB:AE005174; NID:g12518859;
A;Experimental source: strain 0157:H7, substrain EDL933
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A,Status: preliminary; nucleic acid sequence not shown; translation not shown
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C,Superfamily: Escherichia coli hypothetical 23.0K protein b3944
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Pred. No. 11;
1; Mismatches 1; Indels
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75.0%; Pred. No. 11;
tive 1; Mismatches
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6; Conservative
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Cincession: 837034
Rimartins, A.; Costa, J.V.; Ribeiro, G.
Rimartins, A.; Costa, J.V.; Ribeiro, G.
Rimartins, A.; Costa, J.V.; Ribeiro, G.
Riberciption: Nucleotide sequence of the DNA polymerase gene of African swine fever vir.
A;Reference number: 837034
A;Reference number: 837034
A;Return: STO34
A;Residues: preliminary
A;Molecule type: DNA
A;Residues: 1-1244 <a href="https://doi.org/10.1007/physiol/">https://doi.org/10.1007/physiol/">https://doi.org/10.1007/physiol/">https://doi.org/10.1007/physiol/">https://doi.org//>
A;Residues: 1-1244 <a href="https://doi.org/">https://doi.org//>
A;Residues: 1-1244 <a href="https://doi.org/">https://doi.org//>
A;Residues: 1-1244 <a href="https://doi.org/">https://doi.org//>
A;Residues: 1-1244 <a href="https://doi.org/">https://doi.org//>
A;Residues: 1-1244 <a href="https://doi.org/">https://doi.org/</a>
C;Superfamily: African swine fever virus DNA-directed DNA polymerase
C;Reywords: nucleotidyltransferase
                                                                                                         C;Species: African swine fever virus, ASFV
C;Date: 09-Dec-1993 #sequence_revision 13-Mar-1997 #text_change 09-Jul-2004
                                                  .7) - African swine fever virus
ASFV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 1244;
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                                                                             DNA-directed DNA polymerase (EC 2.7.7.7)
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561 VEGWFVRH 568
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-773 «KAM>
A;Cross-references: UNIPROT:Q86654; UNIPARC:UPI00000F8175; GB:S66064; NID:g432575; PIDN:
A;Experimental source: H241-P
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C;Genetics:
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                                                                                                                                                                                                                                                                                                                       structural polyprotein - dengue virus type 4 (fragment)
NjContains: capsid protein; envelope glycoprotein; membrane protein precursor C; Species: dengue virus type 4
C; Date: 07-Apr-1994 #sequence_revision 18-Nov-1994 #text_change 31-Dec-2004
C; Accession: A47666
E; Rikawano, H.; Rostapshov, V.; Rosen, L.; Lai, C.J.
J. Virol. 67, 6567-6575, 1993
A; Title: Genetic determinants of dengue type 4 virus neurovirulence for mice.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Note: sequence extracted from NCBI backbone (NCBIN:138430, NCBIP:138431) C;Superfamily: hepatitis C virus genome polyprotein C;Keywords: glycoprotein; polyprotein
                                               Gaps
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                                            3; Indels
                                        0; Mismatches
          Pred. No. 17;
66.78;
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nes 6; Conservative
                                     6; Conservative
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53 VPPWFLNHP 61
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Characterization of protease cleavage sites involved in the formation of the envelope glycoprotein and three non-structural proteins of dengue virus type 2. New Guinea C strain.";
J. Gen. Virol. 68:1317-1326(1987).
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Submitted (MAY-1993) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                120 AA; 13329 MW; FF86913787CA5C27 CRC64;
                                                                                                                                                      01-NOV-1996, integrated into UniProtKB/TrEMBL.
01-NOV-1996, sequence version 1.
07-FEB-2006, entry version 24.
Genomic RNA for envelope protein E N-term. (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
InterPro; IPR011999; Plav glyE_cen_dm.
InterPro; IPR011999; VIL_GIyE_cen_dm.
InterPro; IPR011998; VIL_GIyE_cen_dm.
Pfam; PF001099; Plavi_M; I.
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                                                                                                120 AA.
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HSSP; Q88653; 10KE.
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protein E.
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066346 9FLAV

1D 066346.

C 066346.

DT 01-NOV-1996, integrated into UnibrotkBy

T 01-NOV-1996, sequence version 1.

DT 07-FEB-2006, entry version 1.

DF Premembrane polyprotein (Fragment).

OC Viruses; seRNA positive-strand viruses, OC Plavivirus; Dengue virus group.

OC RIATIDE SEQUENCE.

RM 111

RP NUCLECTIDE SEQUENCE.

RA Shiu S.Y.W.;

RA Shiu S.Y.W.;

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MEDLINE=87197230; Pubmed=2952760;
                                                                                             PRELIMINARY;
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CHAIN 18
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067424;
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Q67424 9F

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DT Q6744 9F

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DT Q1-N

DT Q1-N

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RR WEIG

RR WEIG

RR WEIG

RR WEIG

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Distributed under the Creative Commons Attribution-NoDerivs License
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MEDIATE_21571640; PubMed=11714970;
MEDIATE_21571640; PubMed=11714970;
Wallow E.C., Gamacho D., Comach G., Cuello de Uzcategui R.,
Holmes E.C., Gould E.A.;
"Molecular epidemiology of dengue type 2 virus in Venezuela: evidence
"Molecular epidemiology of dengue type 2 virus in Venezuela: evidence
for in situ virus evolution and recombination.";
J. Gen. Virol. 82:2945-2953(2001).
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                                                                                                                                                                                                                                                                                                                                                                                                          87.3%; Score 48; DB 2; Length 166; 77.8%; Pred. No. 2.8; tive 1; Mismatches 1; Indels
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GO; GO:0019028; C:viral capsid; IEA.
GO; GO:005198; F:structural molecule activity; IEA.
GO; GO:0019058; F:structural molecule activity; IEA.
GO; GO:0019058; F:structural infectious cycle; IEA.
InterPro; IPR001122; Flavi apsidc.
InterPro; IPR001055; Flavi propep.
Pfam; PF01004; Flavi propep.
Pfam; PF01004; Flavi m; 1.
Pfam; PF01570; Flavi propep; 1.
                                                                                                                                                                                                                                                                                                                             166 AA; 18751 MW; F498748D35909639 CRC64;
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                                                                                            infectious cycle; IEA
                                                                                                                                                                                                                                                                    membrane protein
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EMBL; X72849; CAA51363.1; -; mRNA.
PIR; S40144; S40144.
G0; G0:0019028; C:viral capsid; IEA.
G0; G0:0019058; P:viral infectious cyc
InterPro; IPR002059; Flavi_M.
Flam; PF01167; Flavi_Mripropep.
Pfam; PF01167; Flavi_Dropep; 1.
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QBQZ64;
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237 IETWILRHP 245
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Query Match
Best Local Similarity 77.8
Matches 7; Conservative
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Matches 7; Conservative
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237 IETWILRHP 245
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237 IETWILRHP 245
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Q8QZ66; 21-100
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                                                                                                                                                                                                                                                                                   MEDLINE=21571640; PubMed=11714970; Uzcategui N.Y., Camacho D., Comach G., Cuello de Uzcategui R., Holmes E.C., Gould B.A.; Molecular epidemiology of dengue type 2 virus in Venezuela: evidence for in situ virus evolution and recombination."; Uscategui Uscategui Uscategui Uscategui Virol. 82:2945-2953(2001).
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Flavivirus; Dengue virus group.
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Viruses: sRRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus: Dengue virus group.
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GO; GO:0019028; C: Viral capsid; IEA.

GO; GO:0005198; F: structural molecule activity; IEA.

GO; GO:0005198; F: structural molecule activity; IEA.

GO; GO:0019085; P: structural molecule activity; IEA.

InterPro; IPR00122; Flavi capsid.

InterPro; IPR00069; Flavi molecule.

Pfam; PF01001; Flavi capsid; 1.

Pfam; PF01004; Flavi mil.

Pfam; PF01570; Flavi mil.
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                                                                      01-JUN-2002, integrated into UniProtKB/TrEMBL. 01-JUN-2002, sequence version 1. 01-JUN-2005, entry version 9. Polyprotein (Fragment). Dengue virus type 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-JUN 2002, integrated into UniProtKB/TrEMBL.
01-JUN-2002, sequence version 1.
07-FEB-2006, entry version 9.
Polyprotein (Fragment).
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                                     280 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QBQZ66_9FLAV PRELIMINARY; PRT;
Q8QZ66;
                                   PRT;
                            QBQZ65_9FLAV PRELIMINARY;
Q8QZ65;
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Ouery Cocal Similarity 77.00,
Best Local Similarity 77.00,
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NUCLEOTIDE SEQUENCE.
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                                                                                                                                                                                                                            NCBI_TaxID=11060;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Virīses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
NCBI_TaxID=11060;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1; Indels
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GO; GO:0005198; C:viral capsid; IEA.
GO; GO:0005198; F:structural molecule activity; IEA.
GO; GO:0005198; F:structural molecule activity; IEA.
GO; GO:0005198; F:structural molecule activity; IEA.
InterPro; IPR001122; Flavi appidc.
InterPro; IPR00069; Flavi M.
InterPro; IPR000535; Flavi propep.
Ffam; PF01004; Flavi Appid; 1.
Ffam; PF01004; Flavi M; 1.
                                                                                                                                                                                                                                                                                                                                              280 AA; 31893 MW; 814A8B9B4A22AC20 CRC64;
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GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0005198; F:structural molecule activity; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
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QBQZ67,

QBQZ67,

01-JUN-2002, integrated into UniProtKB/TrEMBL.

01-JUN-2002, sequence version 1.

07-FEB-2006, entry version 9.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1; Mismatches
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                                                                                        InterPro; IPR001122; Flavi_capsidC.
InterPro; IPR000069; Flavi_M.
InterPro; IPR002535; Flavi_propep.
Pfam; PF01003; Flavi_capsid; 1.
Pfam; PF01004; Flavi_M; 1.
Pfam; PF01570; Flavi_propep; 1.
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555 AA.

PRT;

STANDARD;

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                                                                                                                                                    Dengue virus type 2.
Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Dengue virus typė 2.
Viruses, sRRNA positive-strand viruses, no DNA stage, Flaviviridae,
Flavivirus, Dengue virus group.
NCBI_TaxID=11060;
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Pred. No. 9.5;
1; Mismatches 1; Indels
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Serafin I.L., Phillips D.A.;
Submitted (MAY-1997) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                 EMBL, AY706011; AAW62469.1; -; Genomic_RNA.
GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capaid, IEA.
GO; GO:001901; C:viral capaid, IEA.
GO; GO:001901; C:viral envelope; IEA.
GO; GO:0019058; F:structural molecule activity; IEA.
GO; GO:0019058; F:viral infectious cycle; IEA.
InterPro; IPR011999; Flav glyE_cen_dm.
InterPro; IPR011999; Flavi NYE_III.
InterPro; IPR011998; Flavi NYE_III.
InterPro; IPR011998; V:VI_GlyE_IG_III.
InterPro; IPR011998; V:VI_GlyE_cen_dim.
Pfam; PP02832; Flavi Glycop_C; 1.
Pfam; PP00849; Flavi M; 1.
Pfam; PP00948; Flavi M; 1.
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                                                                                                                                                                                                                                                                Taylor C.T., Morgan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-001-1997, integrated into UniProtKB/TrEMBL. 01-001-1997, sequence version 1. 01-PEB-2006, entry version 26. Polyprotein (Fragment).
                                                                                        into UniProtKB/TrEMBL
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                                                                                                                                                                                                                                                             Pyke A.T., Hanna J., Richards A., Taylor C
Humbreys J., Brookse D., Smith G.A.;
"Defining Dengue in the New Millennium.";
Arbovirus Res. Aust. 0:0-0(2005).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OT2290 9FLAV PRELIMINARY; PRT;
012290;
                                                           PRT;
                                      PDT0 9FLAV
QJZPJ0 9FLAV PRELIMINARY; PRT;
QJZPJ0;
27-SEP-2005, integrated into UniPr.
27-SEP-2005, sequence version 1.
07-FEB-2006, entry version 3.
POlyprotein (Fragment).
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Polyprotein. 1 1
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77.8%;
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Best Local Similarity 77.8
Matches 7; Conservative
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2 IETWILRHP 10
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                                                                                                                                                                                                R MSL, D10514; BAA01389.1; -; Genomic_RNA.

R RSP; Q88653; 10KE.

R SMR; P29844; 50-44.

R InterPro; 1PR001099; Flav, glyE_cen_dm.

R InterPro; 1PR000069; Flav, M.

R InterPro; 1PR000059; Flav, M.

R InterPro; 1PR0011999; Flavi, M.

R InterPro; 1PR0011999; Flavi, M.

R InterPro; 1PR0011999; Flavi, M.

R InterPro; 1PR0011999; Flavi, Glycoprof, I.

R Ffam; PF00869; Flavi, Glycoprof; I.

R Ffam; PF01004; Flavi, M.; I.

R Capsid protein; Core protein; Envelope protein;

W Membrane; Polyprotein; Structural protein;

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                                           01-APR-1993, sequence version 1.
07-MAR-2006, entry version 43.
Genome polyprotein [Contains: Envelope protein M (Matrix protein);
Major envelope protein E; Nonstructural protein 1 (NS1)] (Fragment)
                                                                                                         Dengue virus type 2 (strain TH-36).
Viruges; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
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N-linked (GlcNAc. . .) (Potential)
N-linked (GlcNAc. . .) (Potential)
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Pred. No. 9.3;
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Nonstructural protein 1./FIId=PRO_000037924.
                              01-APR-1993, integrated into UniProtKB/Swiss-Prot.
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77.8%;
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GO; GO:0019058; P:viral infectious cycle; IEA
                 Polyprotein.
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SEQUENCE 66
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GO; GO: 001902
GO; GO: 001902
GO; GO: 0019051
GO; GO: 0019051
POLYPICE EI.
NON TER 66
SEQÜENCE 66:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Salda L.T., Parquet M.D., Matias R.R., Natividad F.F., Kobayashi N.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae; Flavivirus; Dengue virus group.
NCBI_TaxID=11060;
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"MOLECULAR EPIDEMIOLOGY OF DENGUE 2 VIRUSES IN THE PHILIPPINES.
                                                                                                                                                                                                                                                                                                                                                                                                                                         87.3%; Score 48; DB 2; Length 578; 77.8%; Pred. No. 9.7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1; Indels
                                                                               SMA; GO.2230; 40-141.

GG; GO.0019021; C:integral to membrane; IEA.

GG; GO.0019021; C:integral to membrane; IEA.

GG; GO.0019031; C:iviral capsid; IEA.

GG; GO.0019031; C:iviral envelope; IEA.

GG; GO.0019058; P:iviral infectious cycle; IEA.

GG; GO.0019058; P:iviral infectious cycle; IEA.

R InterPro; IPR010199; Flav glyE_cen_dm.

R InterPro; IPR000157; Flavi M31.

R InterPro; IPR001159; Flavi JyE_IG-like.

R InterPro; IPR001159; Flavi JyE_Cen_dim.

Pfam; PF02832; Flavi glycop_C; 1.

R Ffam; PF01869; Flavi glycop_C; 1.

R Ffam; PF01869; Flavi glycop_C; 1.

R Ffam; PF01049; Flavi M; 1.

R FF000; PF001496; Flavi M; 1.
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Submitted (OCT-2004) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                            578 578
578 AA; 63606 MW; 1C03A7CFD72C567D CRC64;
                                                                                                                                                                                                                                                                                                                                  membrane protein.
envelope protein.
nonstructural protein 1.
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GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019011; C:viral envelope; IEA.
GO; GO:0019011; F:structural molecule activity; IEA.
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QBCV3;
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                                           EMBL; AF004019; AAB61366.1; -; mRNA.
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542
>578
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                                                           )88653; 10KE.
.2290; 48-441.
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                                                                                                                                       Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
NCBI_TaxID=11060;
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                                                                                          Length 661;
                                                                                                                                       1; Indels
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                       661
73049 MW; 2A644DEADA728CF2 CRC64;
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GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:005198; F:structural molecule activity; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
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                                                                                     87.3%; Score 48; DB 2;
77.8%; Pred. No. 11;
tive 1; Mismatches
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Q3BCV5 9FLAV PRELIMINARY; PRT; 661 AA.

AC Q3BCV5;
DT 22-NOV-2005, integrated into UniProtKB/TrEMBL.
DT 22-NOV-2005, sequence version 1.
DT 72-EBB-2006, entry version 3.
DF 07-PEB-2006, entry version 3.
DF 07-PEB-2006, entry version 3.
                                                                                                                                                                                                                                                                                                                                           661 AA.
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Am. J. Trop. Med. Hyg. 73:796-802(2005).
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Q3BCV4 9FLAV
ID Q3BCV4_9FLAV PRELIMINARY;
AC Q3BCV4;
                                                             Query Match
Best Local Similarity 77.00,
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Best Local Similarity 77.8
Matches 7; Conservative
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STRAIN=00U3/2000/human;
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PubMed=16222028;
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661 AA;
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ID Q3BCX8 9FLAV
AC Q3BCX8;
    GO; GO: 0016021
GO; GO: 0019028
GO; GO: 0019031
GO; GO: 0019031
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SEQÜENCE 661
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SEQUENCE 66
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                                                                                                                STRAIN=SLMC70/1995/human;
PubMed=16222028;
Salda L.T., Parquet M.D., Matias R.R., Natividad F.F., Kobayashi N.,
Morita K.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Dengue virus type 2.
Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
NCBI_TaxID=11060;
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GENOTYPE SHIFT AND LOCAL EVOLUTION.";
Am. J. Trop. Med. Hyg. 73:796-802(2005).
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GENOTYPE SHIFT AND LOCAL EVOLUTION.";
Am. J. Trop. Med. Hyg. 73:796-802(2005).
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Submitted (OCT-2004) to the EMBL/GenBank/DDBJ databases.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL, AY786396; AAX18214.1; -; Genomic_RNA.
GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:005199; F:structural molecule activity; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
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Q3BCX6 9FLAV PRELIMINARY;
Q3BCX6;
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STRAIN=SLMC70/1995/human;
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STRAIN=00St23/2000;
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PubMed=16222028;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
NCBI_TaxID=11060;
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"MOLECULAR BRIDEMIOLOGY OF DENGUE 2 VIRUSES IN THE PHILIPPINES:
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Submitted (OCT-2004) to the EMBL/GenBank/DDBJ databases.
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73143 MW; 5509B5931AE2BF2B CRC64;
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GO, GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:001989; F:structural molecule activity; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
GO:0016021; C:integral to membrane; IEA.
GO:0019028; C:viral capsid; IEA.
GO:001901; C:viral enveloge; IEA.
GO:001901; F:structural molecule activity; IEA.
GO:0019058; P:viral infectious cycle; IEA.
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77.8%; Pred. No. 11;
tive 1; Mismatches
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Am. J. Trop. Med. Hyg. 73:796-802(2005).
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Q3BCX7 9FLAV
ID Q3BCX7 PLAV
AC Q3BCX7;
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Best Local Similarity 77...
7; Conservative
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123 IETWILRHP 131
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22-NOV-2005, sequence version 1.
7-FEB-2006, entry version 3.
Polyprotein (Fragment).
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                                           EMBL; AY786372; AAX18190.1; -; Genomic RNA
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Q3BCYO;
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123 IETWILRHP 131
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123 IETWILRHP 131
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PubMed=16222028;
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Distributed under the Creative Commons Attribution-NoDerivs License
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Pubmed=16222028;
Salda L.T., Parquet M.D., Matias R.R., Natividad F.F., Kobayashi N.,
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                                                     Dengue virus type 2.
Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
NCBL_TaxID=11060;
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Viruses; BRRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
NCBI_TaxID=11060;
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Am. J. Trop. Med. Hyg. 73:796-802(2005).
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Submitted (OCT-2004) to the EMBL/GenBank/DDBJ databases.
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Submitted (OCT-2004) to the EMBL/GenBank/DDBJ databases.
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661 AA; 73086 MW; 899A28D6B96FB5B0 CRC64;
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GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019311; C:viral envelope; IEA.
GO; GO:0005198; F:structural molecule activity; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
22-NOV-2005, integrated into UniProtKB/TrEMBL. 22-NOV-2005, sequence version 1. Polyprotein (Fragment).
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Am. J. Trop. Med. Hyg. 73:796-802(2005).
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QBCX9;
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Best Local Similarity 77.0-
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PubMed=16222028;
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STRAIN=99Sa695/1999;
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Distributed under the Creative Commons Attribution-NoDerivs License
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Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
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Am. J. Trop. Med. Hyg. 73:796-802(2005).
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Submitted (OCT-2004) to the EMBL/GenBank/DDBJ databases.
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661 AA; 73072 MW; 654A28D6B96FB5A8 CRC64;
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GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0013011; C:viral envelope; IEA.
GO; GO:001908; F:structural molecule activity; IEA.
GO; GO:0019089; P:viral infectious cycle; IEA.
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GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:001301; C:viral envelope; IEA.
GO; GO:005198; F:structural molecule activity; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
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GO; CO:0015621; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:001998; F:structural molecule activity; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
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Viruses; sBNAA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
NCBI_TaxID=11060;
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Submitted (OCT-2004) to the EMBL/GenBank/DDBJ databases.
                      Salda L.T.D.;
Submitted (OCT-2004) to the EMBL/GenBank/DDBJ databases.
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73096 MW; CF865AAE54ADE0F1 CRC64;
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661 AA; 73072 MW; 654A28D6B96FB5A8 CRC64;
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GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:001908; F:structural molecule activity; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
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STRAIN=BRL3/1996;
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PubMed=16222028;
Salda L.T., Parquet M.D., Matias R.R., Natividad F.F., Kobayashi N.,
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Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
NCBI_TaxID=11060;
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Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
NCBL_TaxID=11060;
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Am. J. Trop. Med. Hyg. 73:796-802(2005).
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GENOTYPE SHIFT AND LOCAL EVOLUTION.";
Am. J. Trop. Med. Hyg. 73:796-802(2005).
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661 AA; 73054 MW; 751344A77E73C46F CRC64;
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GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:00190519; F:structural molecule activity; IEA.
GO; GO:00190518; F:structural infectious cycle; IEA.
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22-NOV-2005, integrated into UniProtKB/TrEMBL. 22-NOV-2005, sequence version 1.
07-FEB-2006, entry version 3.
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POTYPEB-2006, entry version 3.
POTYPOTE (Fragment).
                                               661 AA.
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STRAIN=CSMC7/1996;
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nes 7; Conserv
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                                             Q3BCY1 9FLAV
Q3BCY1;
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                           9FLAV
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRAIN=BC134-Merida-94;
PubMed=15516647;
Lorono-Fino M.A., Farfan-Ale J.A., Zapata-Peraza A.L.,
Rosado-Paredes B.P., Flores-Flores L.F., Garcia-Rejon J., Diaz F.J.,
Blitvich B.J., Jimenez-Rios E., Blair C.D., Olson K.E., Black W. IV,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Virūses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
NCBI_TaxID=11060;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Introduction of the American/Asian genotype of dengue 2 virus into the Yucatan State of Mexico.";
Am. J. Trop. Med. Hyg. 71:485-492(2004).
                                                                                                                                                                                                                                                                                                                                                                                                                                                         87.3%; Score 48; DB 2; Length 661; 77.8%; Pred. No. 11;
                                                                                                                            Submitted (OCT-2004) to the EMBL/GenBank/DDBJ databases
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GO; GO:0016021; C:integral to membrane; IEA.

GO; GO:0019028; C:viral capsid; IEA.

GO; GO:0019028; C:viral envelope; IEA.

GO; GO:0019031; C:viral envelope; IEA.

GO; GO:0019058; F:structural molecule activity; IEA.

GO; GO:0019058; F:structural molecule activity; IEA.

GO; GO:0019058; F:structural molecule activity; IEA.

InterPro; IFR011999; Flavigly cen_dm.

InterPro; IFR001059; Flavigly Enough.

InterPro; IFR00036; Flavigly Enough.

InterPro; IFR00036; Flavigly Enough.

InterPro; IFR011998; V1_glyE_cen_dim.

Pfam; PF02832; Flavigly Cop. C; 1.

Pfam; PF03832; Flavigly Cop. C; 1.

Pfam; PF00865; Flavigly Cop. C; 1.
                                                                                                                                                                                                                                                                                                                                                                                                661 661
661 AA; 73072 MW; 654A28D6B96FB5A8 CRC64;
                                                                                                                                                                                                                             EMBL; AY786366; AAX18184.1; -; Genomic_RNA.
GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:0005198; F:structural molecule activity; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 050186,
04-JAN-2005, integrated into UniProtKB/TrEMBL.
04-JAN-2005, sequence version 1.
04-JAN-2005, entry version 5.
Polyprotein (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       661 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1; Mismatches
                     Am. J. Trop. Med. Hyg. 73:796-802(2005).
          GENOTYPE SHIFT AND LOCAL EVOLUTION.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; AY466449; AAS45234.1; -; mRNA.
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QSQIB6 9FLAV
ID QSQIB6_9FLAV PRELIMINARY; PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity 77.8 ies 7; Conservative
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123 IETWILRHP 131
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                                                                                      STRAIN=SLMC125/1995;
                                                                   NUCLEOTIDE SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                          Salda L.T., Parquet M.D., Matias R.R., Natividad F.F., Kobayashi N.,
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Morita K.;
                                                                                                                                                                                                                                                                   Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Dengue virus type 2.
Viruses, seRNA positive-strand viruses, no DNA stage, Flaviviridae,
Flavivirus, Dengue virus group.
NCBI_TaxID=11060,
                                                                                                                                                                                                                                                                                                                                                                                                                                                  "MOLECULAR EPIDEMIOLOGY OF DENGUE 2 VIRUSES IN THE PHILIPPINES: GENOTYPE SHIFT AND LOCAL EVOLUTION.";
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL, AY786367; AAX18185.1; -; Genomic RNA.
GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:005198; F:structural molecule activity; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
                                                                                                                                                            22-NOV-2005, integrated into UnibrotKB/TrEMBL. 22-NOV-2005, sequence version 1. 07-FBB-2006, entry version 3. 07-PBC-2006, entry version 3. Dengue virus type 2.
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                                                                                                                            661 AA.
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QBCY4;
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NCBL_TaxID=11060;
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QBBCYS;
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123 IETWILRHP 131
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STRAIN=SLMC125/1995;
PubMed=16222028;
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                                                                                                                                                                                                                                                                                                                                                                  STRAIN=DOH90/1995;
PubMed=16222028;
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SEQUENCE 66
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Distributed under the Creative Commons Attribution-Noberivs License
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Rosado-Paredes E.P., Flores-Flores L.F., Garcia-Rejon J., Diaz F.J.,
Blitvich B.J., Jimenez-Rios E., Blair C.D., Olson K.E., Black W. IV,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Introduction of the American/Asian genotype of dengue 2 virus into the Yucatan State of Mexico.";
Am. J. Trop. Med. Hyg. 71:485-492(2004).
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Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
                                                                                                                                                                                                                                                                   Viruses; SBRNA positive-strand viruses, no DNA stage; Flaviviridae; Flavivirus; Dengue virus group.
NCBI_TaxID=11060;
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GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019038; C:viral envelope; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
InterPro; IPR011999; Flavight Cen.dm.
InterPro; IPR011999; Flavight Cen.dm.
InterPro; IPR011999; Flavight IIA.
InterPro; IPR011999; Vilgipt Ig-like.
InterPro; IPR011998; Vilgipt Ig-like.
InterPro; IPR011998; Vilgipt Cen.dim.
Pfam; PF02882; Flavightcop.C; 1.
Pfam; PF02882; Flavightcop.C; 1.
Pfam; PF01570; Flavightcop.C; 1.
Pfam; PF01570; Flavightcop.C; 1.
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               OSV188 9FLAV PRELIMINARY; PRT; 661 AA. OSV188; 07-DEC-2004, integrated into UniProtKB/TrEMBL. 07-DEC-2004, sequence version 1. 07-PEB-2006, entry version 8. Polyprotein (Fragment).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; AY449683; AAS14974.1; -; Genomic_RNA.
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1; Mismatches
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QSVIB9;
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NCBI_TaxID=11060;
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PubMed=15516647;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRAIN=13381/Chochola 02;
PubMed=15516647;
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nes 7; Conservative
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                                                                                                                                                                                                                                                       Dengue virus type 2
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SEQUENCE 66
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Distributed under the Creative Commons Attribution-NoDerivs License
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Rosado-Paredes B.P., Flores-Flores L.F., Garcia-Rejon J., Diaz F.J.,
Blitvich B.J., Jimenez-Rios E., Blair C.D., Olson K.E., Black W. IV,
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"Introduction of the American/Asian genotype of dengue 2 virus into the Yucatan State of Mexico.";
Am. J. Trop. Med. Hyg. 71:485-492(2004).
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GO; GO:0019028; C:viral enwebrane; IEA.
GO; GO:0019028; C:viral envelope; IEA.
GO; GO:0019028; C:viral envelope; IEA.
GO; GO:0019028; F:structural molecule activity; IEA.
GO; GO:0019058; F:structural infectious cycle; IEA.
InterPro; IPR011999; Flav glyE_cen_dm.
InterPro; IPR010999; Flav glyE_cen_dm.
InterPro; IPR000535; Flavi_propep.
InterPro; IPR011998; Vir_glyE_ig_1ike.
InterPro; IPR011998; Vir_glyE_cen_dim.
Ffam; PF02832; Flavi_glycop_C; 1.
Pfam; PF01049; Flavi_M; 1.
                                                                    1 1
661 661
661 AA, 73207 MW, A919612986E04157 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   97 9FLAV OSVIBA PRELIMINARY; PRT; 661 AA. 05VIB7; 07-DEC-2004, integrated into UniProtKB/TrEMBL.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                07-DEC-2004, sequence version 1.
07-FEB-2006, entry version 8.
Polyprotein (Fragment).
Dengue virus type 2.
Pfam; PF01570; Flavi_propep; 1.
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Best Local Similarity 77.0
Local 7; Conservative
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PubMed=15516647;
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123 IETWILRHP 131
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                                  Polyprotein.
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GO:0019058; P:viral infectious cycle; IEA.
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QSV191<u>9</u>FLAV PRELIMINARY;
QSV191;
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                                                                                                                   Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms Distributed under the Creative Commons Attribution-NoDerivs License
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Rosado-Paredes B.P., Flores-Flores L.F., Garcia-Rejon J., Diaz F.J.,
Blitvich B.J., Jimenez-Rios E., Blair C.D., Olson K.E., Black W. IV,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       07-DEC-2004, integrated into UniProtKB/TrEMBL.
07-DEC-2004, sequence version 1.
07-DEC-2006, entry version 8.
07-PED-2006, entry version 8.
Delyprotein (Fragment).
Dengue virus type 2.
Viruses; BSRNA positive-strand viruses, no DNA stage; Flaviviridae;
Plavivirus; Dengue virus group.
                                               "Introduction of the American/Asian genotype of dengue 2 virus into
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Lorono-Pino M.A., Farfan-Ale J.A., Zapata-Peraza A.L.,
Rosado-Paredes B.P., Flores-Flores L.F., Garcia-Rejon J., Diaz F.J.,
Blitvich B.J., Jimenez-Rios E., Blair C.D., Olson K.E., Black W. IV,
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                                                                                                                                                               EMBL; AY449662; AAS14973.1; .; Genomic_RNA.

SNR; QSV189; 167-560.

GO; GO:0016021; C:integral to membrane; IEA.

GO; GO:0019031; C:viral capsid; IEA.

GO; GO:0019031; C:viral envelope; IEA.

GO; GO:0019038; F:structural molecule activity; IEA.

GO; GO:0019089; F:structural molecule activity; IEA.

GO; GO:0019089; F:structural molecule activity; IEA.

GO; GO:0019089; F:structural infectious cycle; IEA.

InterPro; IPR011999; Flavi JVE_cen_dm.

InterPro; IPR0010535; Flavi Jvcppp.

InterPro; IPR001035; Flavi Jvcppp.

Ffam; PF02832; Flavi GJVcop_C; 1.

Pfam; PF02832; Flavi GJVcop_C; 1.

Pfam; PF00869; Flavi Jvcoprot; 1.

Pfam; PF01049; Flavi M; 1.
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GO; GO:0016021; C:integral to membrane; IEA.

GO; GO:0019039; C:viral capsid; IEA.

GO; GO:0019031; C:viral envelope; IEA.

GO; GO:0005198; F:structural molecule activity; IEA.
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Am. J. Trop. Med. Hyg. 71:485-492(2004).
                                                                     the Yucatan State of Mexico.";
Am. J. Trop. Med. Hyg. 71:485-492(2004)
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QSVI90;
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PubMed=15516647;
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123 IETWILRHP 131
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STRAT=12914/Tekax 01;
PubMed=15516647;
Dorono-Pino M.A., Farfan-Ale J.A., Zapata-Peraza A.L.,
Rosado-Paredes E.P., Flores-Flores L.F., Garcia-Rejon J., Diaz F.J.,
Blitvich B.J., Jimenez-Rios E., Blair C.D., Olson K.E., Black W. IV,
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GG; GG:0019028; C:viral capsid; IEA.
GG; GG:0019031; C:viral envelope; IEA.
GG; GG:0019031; C:viral envelope; IEA.
GG; GG:0005198; F:structural molecule activity; IEA.
GG; GG:0019038; F:structural molecule activity; IEA.
GG; GG:0019038; F:structural molecule activity; IEA.
InterPro; IPR001999; Flavi infectious cycle; IEA.
InterPro; IPR001999; Flavi infectious cycle; IEA.
InterPro; IPR001999; Flavi infectious cycle; IEA.
InterPro; IPR001999; Flavi infectious cycle; IEA.
Ffam; PF00869; Flavi infectious cycle; I.
Ffam; PF01004; Flavi infectious cycle; I.
Ffam; PF01004; Flavi infectious cycle; I.
Ffam; PF01004; Flavi infectious cycle; I.
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661 AA; 73080 MW; 5216054D684173C0 CRC64;
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07-DEC-2004, sequence version 1.
07-EBB-2006, entry version 8.
Polyprotein (Fragment).
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SMR; QSV191; 167-560.
InterPro; IPR011999; Flav glyE cen dm.
InterPro; IPR001069; Flavi M.
InterPro; IPR002535; Flavi propp.
InterPro; IPR001398; Flavi propp.
InterPro; IPR0011998; Vrl glyE ig-like.
InterPro; IPR011998; Vrl glyE cen dim.
Pfam; PF02832; Flavi glycop. C; 1.
Pfam; PF01004; Flavi glycoprot; 1.
Pfam; PF01570; Flavi M; 1.
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NCBI_TaxID=11060;
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Dengue virus type 2
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Rosado-Paredes E.P., Flores-Flores L.F., Garcia-Rejon J., Diaz F.J.,
Biltvich B.J., Jimenez-Rios E., Blair C.D., Olson K.E., Black W. IV,
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Am. J. Trop. Med. Hyg. 71:485-492(2004).
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Ylubes; BRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
NCBI_TaxID=11060;
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                                         1; Indels
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SNR; QSV192; 167-560.

GO; GO:0016021; C:integral to membrane; IEA.

GO; GO:0019028; C:viral capsid; IEA.

GO; GO:0019028; C:viral capsid; IEA.

GO; GO:0019028; F:structural molecule activity; IEA.

GO; GO:0019038; F:structural infectious cycle; IEA.

InterPro; IPR011999; Flav; Jropep.

InterPro; IPR000069; Flav; Jropep.

InterPro; IPR000353; Flav; Jropep.

InterPro; IPR011998; V:T_G1yE_G1_like.

InterPro; IPR011998; V:T_G1yE_G1_like.

InterPro; IPR011998; V:T_G1yE_G1_like.

InterPro; IPR011998; V:T_G1yE_G1_like.

InterPro; IPR011998; V:T_G1yE_G1_like.

InterPro; IPR011998; V:T_G1yE_G1_like.

InterPro; IPR011998; V:T_G1yE_G1_like.

InterPro; IPR011998; V:T_G1yE_G1_like.

InterPro; IPR011998; V:T_G1yE_G1_like.

InterPro; IPR011998; V:T_G1yE_G1_like.

InterPro; IPR011998; V:T_G1yE_G1_like.

InterPro; IPR011998; V:T_G1yE_G1_like.

InterPro; IPR011998; V:T_G1yE_G1_like.

InterPro; IPR011998; V:T_G1yE_G1_like.

InterPro; IPR011998; V:T_G1yE_G1_like.

InterPro; IPR011998; V:T_G1yE_G1_like.

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InterPro; IPR011998; V:T_G1yE_G1_like.

InterPro; IPR011998; V:T_G1yE_G1_like.

InterPro; IPR011998; V:T_G1yE_G1_like.

InterPro; IPR011998; V:T_G1yE_G1_like.

InterPro; IPR011998; V:T_G1yE_G1_like.

InterPro; IPR011998; V:T_G1yE_G1_like.

InterPro; IPR011998; V:T_G1yE_G1_like.

InterPro; IPR011998; V:T_G1yE_G1_like.

InterPro; IPR011998; V:T_G1yE_G1_like.

InterPro; IPR011998; V:T_G1yE_G1_like.

InterPro; IPR011998; V:T_G1yE_G1_like.

InterPro; IPR011998; V:T_G1yE_G1_like.

InterPro; IPR011998; V:T_G1yE_G1_like.

InterPro; IPR011998; V:T_G1yE_G1_like.

InterPro; IPR011998; V:T_G1yE_G1_like.

InterPro; IPR011998; V:T_G1yE_G1_like.

InterPro; IPR011998; V:T_G1yE_G1_like.

InterPro; IPR011998; V:T_G1yE_G1_like.

InterPro; IPR011998; V:T_G1yE_G1_like.

InterPro; IPR011998; V:T_G1yE_G1_like.

InterPro; IPR011998; V:T_G1yE_G1_like.

InterPro; IPR011998; V:T_G1yE_G1_like.

InterPro; IPR011998; V:T_G1yE_G1_like.

InterPro; IPR011998; V:T_G1yE_G1_like.

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661 AA; 73024 MW; 367D6F1A9F25932B CRC64;
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OSV193-
07-DEC-2004, integrated into UniProtKB/TrEMEL.
07-DEC-2006, entry version 1.
07-DEC-2006, entry version 8.
07-DEC-2006, entry version 8.
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07-DEC-2004, integrated into UniProtKB/TrEMBL.
07-DEC-2004, sequence version 1.
07-FEB-2006, entry version 8.
         Pred. No. 11;
1; Mismatches
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PubMed=15516647;
77.8%;
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Best Local Similarity 77.8
----- 7; Conservative
         Best Local Similarity 77.8
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Distributed under the Creative Commons Attribution-NoDerivs License
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Rosado-Paredes E.P., Flores-Flores L.F., Garcia-Rejon J., Diaz F.J.,
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"Introduction of the American/Agian genotype of dengue 2 virus into the Yucatan State of Mexico.";
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Flavivirus; Dengue virus group.
NCBI_TaxID=11060;
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GO; GO:0019021; C:integral to membrane; IEA.
GO; GO:0019031; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:0019038; F:structural molecule activity; IEA.
GO; GO:0019058; P:structural molecule activity; IEA.
GO; GO:0019058; P:structural molecule activity; IEA.
InterPro; IPR001999; F:lavi propep.
InterPro; IPR001999; F:lavi propep.
InterPro; IPR01998; VII_glyE_IG-like.
InterPro; IPR01998; VII_glyE_con_dim.
Pfam; PP02832; F:lavi_glyCop_C; 1.
Pfam; PP00869; Flavi_glyCop_C; 1.
Pfam; PP010869; Plavi_M; 1.
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                                                                                                                                                              STRAIN=C-932/Acapulco 97;
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Matches 7; Conservative
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123 IETWILRHP 131
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                                                                                                                                  NUCLEOTIDE SEQUENCE
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Aaw09409
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Aad09806
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Aaw06591
Aae13164
Aae17431
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Attenuate Wild-type DEN1-S275 M1-40/DEN

Attenuate Dengue vi Dengue vi

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Dengue

Dengue-2 Dengue vi Peptide m Peptide m Human GPC

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The present invention relates to an isolated and purified ApoptoM peptide. The invention is useful as a vaccine for the prevention and treatment of pathological conditions from non-specific febrile illnesses to severe hemorrhagic manifestations, encephalitic syndromes and these pathological conditions are linked to Flavivirus infection or cancers. The invention is also useful in gene therapy. The present sequence is a p(95-114) EGFP (enhanced green fluorescent protein) (MI-M40) DBN (dengue)-2 (136F) plasmid DNA encoded protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New isolated and purified ApoptoM peptide comprises 9 amino acids, useful as a vaccine for preventing or treating pathological conditions from nonspecific febrile illnesses to severe hemorrhagic manifestations or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gene therapy, protein purification, virucide, cytostatic, vaccine, hemorrhage, bleeding, infection, flavivirus infection, neoplasm, cancer, DEN, dengue, mutant, mutein.
                                Gene therapy, protein purification, virucide, cytostatic, vaccine, hemorrhage, bleeding, infection, flavivirus infection, neoplasm, cancer, DEN, dengue, EGFP, enhanced green fluorescent protein.
p(95-114) EGFP(M1-M40)DEN-2 (136F) plasmid DNA encoded protein #3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%; Score 55; DB 9; Length 48; 100.0%; Pred. No. 0.022;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Disclosure, SEQ ID NO 35; 30pp; English.
                                                                                                                                                                                                                                                GAC"
                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                               /note= "Encoded by
                                                                                                                                                                                                                                                "Encoded by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADW12595 standard; peptide; 9 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                           30-JUN-2003; 2003US-00608029
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                                                                                                                                                                                                                                                   note=
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nes 9; Conserv
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                                                                                                                                                                                             Misc-difference
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                                                                                                                                                                                                                                                                                                                     US2004266987-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 48 AA;
                                                                                                         Dengue virus.
                                                                                                                                            Unidentified.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present invention relates to an isolated and purified ApoptoM peptide. The invention is useful as a vaccine for the prevention and treatment of pathological conditions from non-specific febrile illnesses to severe hemorrhagic manifestations, encephalitic syndromes and these pathological conditions are linked to Plavivirus infection or cancers. The invention is also useful in gene therapy. The present sequence is a M1-40/DEN (dengue)-2 (P36) mutant protein.
       Human sec
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DEN3 (Sle
                                                                                                                                                                                                                                                                                                                                       Gene therapy; protein purification; virucide; cytostatic; vaccine;
hemorrhage; bleeding; infection; flavivirus infection; neoplasm; cancer;
DEN; dengue; mutant; mutein.
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                     Abg11655 N
Adf70474 C
Adg93316 D
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       Abu07567
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                                                                                                             ALIGNMENTS
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                     ABG11655
ADF70474
ADG93316
       ABU07567
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                                                                                                                                                                                                  ADW12582 standard; peptide; 39 AA
                                                                                                                                                                                                                                                                                                      M1-40/DEN-2 (F36) mutant protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30-JUN-2003; 2003US-00608029
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Best Local Similarity 100.
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IETWFLRHP 39
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                                                                                                                                                                                                                                                                                                                                                                                                              Dengue virus
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acids, useful
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purified ApoptoM peptide comprises 9 amino acids, useful preventing or treating pathological conditions from non-illnesses to severe hemorrhagic manifestations or
                                                                                                                               peptide. The invention is useful as a vaccine for the prevention and treatment of pathological conditions from non-specific febrile illnesses to severe hemorrhagic manifestations, encephalitic syndromes and these pathological conditions are linked to Flavivirus infection or cancers. The invention is also useful in gene therapy. The present sequence is a M20-40/DEN (dengue)-2 mutant protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present invention relates to an isolated and purified ApoptoM peptide. The invention is useful as a vaccine for the prevention and treatment of pathological conditions from non-specific febrile illnesses pathological conditions, encephalitic syndromes and these pathological conditions are linked to Plavivirus infection or cancers. The invention is also useful in gene therapy. The present sequence is a M10-40/DEN (dengue)-2 mutant protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gene therapy; protein purification; virucide; cytostatic; vaccine;
hemorrhage; bleeding; infection; flavivirus infection; neoplasm; cancer;
                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                   present invention relates to an isolated and purified ApoptoM
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                                                                                                                                                                                                                                                                                     Length 21;
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Pred. No. 0.11;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADW12593 standard; peptide; 32 AA.
                                                                                   Example 3; Fig 4; 30pp; English.
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                                                                                                                                                                                                                                                                                  89.1%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEN; dengue; mutant; mutein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           M10-40/DEN-2 mutant protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          24-MAR-2005 (first entry)
                                                                                                                                                                                                                                                                                                                       8; Conservative
                 as a vaccine for prevent
specific febrile illness
encephalitic syndromes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    encephalitic syndromes.
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                                                                                                                                                                                                                                                                                                                                                                                      13 İETWILRHP
                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
   isolated and
                                                                                                                                                                                                                                                      Sequence 21 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US2004266987-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 32 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Dengue virus
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADW12593;
                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 5
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                                                                                                                                                                                                                                                                                  New isolated and purified ApoptoM peptide comprises 9 amino acids, useful as a vaccine for preventing or treating pathological conditions from non-specific febrile illnesses to severe hemorrhagic manifestations or
                                                                                                                                                                                                                                                                                                                                                                                                The present invention relates to an isolated and purified ApoptoM peptide. The invention is useful as a vaccine for the prevention and treatment of pathological conditions from non-specific febrile illnesses to severe hemorrhagic manifestations, encephalitic syndromes and these pathological conditions are linked to Plavivirus infection or cancers. The invention is also useful in gene therapy. The present sequence is a M32-40/DEN (dengue)-2 mutant protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gene therapy, protein purification; virucide; cytostatic; vaccine; hemorrhage; bleeding; infection; flavivirus infection; neoplasm; cancer; DEN; dengue; mutant; mutein.
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Pred. No. 2.1e+06;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADW12594 standard; peptide; 21 AA.
                                                                                                                                                                                                                                                                                                                                                                  Example 3; Fig 4; 30pp; English.
                                                                                                                                               30-JUN-2003; 2003US-00608029.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        89.1%;
                                                                                                              30-JUN-2003; 2003US-00608029
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8; Conservative
                                                                                                                                                                                                                                                                                                                                 encephalitic syndromes
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                                                                                                                                                                                (INSP ) INST PASTEUR
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Best Local Similarity
Matches 8; Conser
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                                             US2004266987-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 9 AA;
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               Dengue
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Dengue (DEN)-2 virus M ectodomain.
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                                                                                                                                                                    Courageot
                                                                                                                                                  (INSP ) INST PASTEUR
                                                                                                                                                                                     WPI; 2002-139706/18.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Yellow fever virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US2004266987-A1
                                                     Dengue virus; 2.
                                                                                                                                                                                                                                                                                                                                                                    Sequence 40 AA;
                                                                        WO200196376-A2
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                                                                                           20-DEC-2001
                                                                                                                                                                    Despres P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADW12578;
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                                                                                                                                                                                                                                                                                                                                                                                                                                  The present invention relates to an isolated and purified ApoptoM peptide. The invention is useful as a vaccine for the prevention and treatment of pathological conditions from non-specific febrile illnesses to severe hemorrhagic manifestations, encephalitic syndromes and these pathological conditions are linked to Plavivirus infection or cancers. The invention is also useful in gene therapy. The present sequence is a M1-40/DEN (dengue)-2 protein.
                                                                                                                                                                            Gene therapy, protein purification; virucide, cytostatic, vaccine;
hemorrhage; bleeding; infection; flavivirus infection; neoplasm; cancer;
DEN; dengue.
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                   Gaps
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Pred. No. 0.21;
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 DB 9; Length 32;
                  1; Indels
         0.17;
Score 49; DB 9
Pred. No. 0.17;
0; Mismatches
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                                                                                                      ADW12576 standard; peptide; 39 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  89.1%;
88.9%;
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89.1%;
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(first entry)
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Best Local Similarity 88.>
                                                                                                                                           (first entry)
         Best Local Similarity 88.9
Matches 8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                 encephalitic syndromes
                                                                                                                                                                                                                                                                                                                                  Despres P, Catteau A;
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                                                       32
                                                                                                                                                                                                                                                                                                                (INSP ) INST PASTEUR.
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                                      1 IETWFLRHP 9
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                                                                                                                                                             M1-40/DEN-2 protein
                                                       IETWILRHP
                                                                                                                                                                                                                                       US2004266987-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 39 AA;
                                                                                                                                                                                                                     Dengue virus
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18-APR-2002
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 Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Novel apoptosis inducing polypeptide fragments of Dengue virus-1 or 2 M protein, useful for inducing apoptosis in a cell of a human patient suffering from cancer or flavivirus infection.
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Dengue virus, pRM glycoprotein; E glycoprotein; apoptosis, virucide;
cancer; flavivirus infection, cytostatic; DEN-2 M ectodomain.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Catteau A;
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Pred. No. 0.22;
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Best Local Similarity 86..
8, Conservative
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suffering from cancer or flavivirus infection.
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                            Claim 42; Fig 11; 45pp; English.
                                                                                                                                                                                                                                                                                               89.1%;
88.9%;
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                                                                                                                                                                                                                                                                                                               Best Local Similarity 88.5
Matches 8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                     48
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                                                                                                                                                                                                                                             C-terminus of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO2003102166-A2
                                                                                                                                                                                                                                                                      Sequence 48 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Dengue virus.
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                                                                                          New isolated and purified ApoptoM peptide comprises 9 amino acids, useful as a vaccine for preventing or treating pathological conditions from non-specific febrile illnesses to severe hemorrhagic manifestations or
                                                                                                                                                                                         The present invention relates to an isolated and purified ApoptoM peptide. The invention is useful as a vaccine for the prevention and treatment of pathological conditions from non-specific febrile illnesses to severe hemorrhagic manifestations, encephalitic syndromes and these pathological conditions are linked to Plavivirus infection or cancers. The invention is also useful in gene therapy. The present sequence is a M1-40/YF (yellow fever).17D (T34, I36, I37, H39) mutant protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Novel apoptosis inducing polypeptide fragments of Dengue virus-1 or 2 M protein, useful for inducing apoptosis in a cell of a human patient
                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Dengue virus; pRM glycoprotein; B glycoprotein; apoptosis; virucide; cancer; flavivirus infection; cytostatic; BGFP; DEN-2 protein; enhanced green fluorescent protein; fusion protein; M ectodomain.
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                                                                                                                                                                                                                                                                                                                                         Score 49; DB 9; Length 40;
Pred. No. 0.22;
0; Mismatches 1; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note= "Encoded by GTTATC"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (95-114)EGFP(206-245)DEN-2 fusion protein.
                                                                                                                                                                Example 3; SEQ ID NO 25; 30pp; English
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAE17433 standard; protein; 48 AA.
                                                                                                                                                                                                                                                                                                                                      89.1%;
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Best Local Similarity 88.7%,
Seconservative
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                                                                                                                                        encephalitic syndromes.
                                     Despres P, Catteau A;
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        (INSP ) INST PASTEUR.
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                                                               WPI; 2005-047647/05
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                                                                                                                                                                                                                                                                                                                                                                                                                       32 IETWILRHP
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N-PSDB; AAD27335.
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Dengue virus; 1.
Unidentified.
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                                                                                                                                                                                                                                                                                                              Sequence 40 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chimeric
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ID AAE1
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The invention relates to pro-apoptotic fragments of the Dengue virus (DEN) pRW and E glycoproteins, methods for screening molecules capable of inducing apoptosis and methods of inducing apoptosis in a cell. The invention particularly relates to DEN-1 M (a membrane protein anchored in envelope surrounding the nucleocapsid of the virus) ectodomain sequence, ben-1-C amino acid sequence and DEN-2 M ectodomain sequence. Sequences of the invention are useful for inducing apoptosis in a cell of a patient suffering from cancer or flavivirus infection. They are also useful for suffering molecules which inhibit apoptosis. The present sequence is (95-114) EGFP DEN-2 fusion protein construct. This construct comprises 95-114 of the C-terminus of the C-protein of the DEN-1 virus strain BR/90 fused to the N-terminus of enhanced green fluorescent protein (EGPP) and DEN-2 virus strain Jamaica M ectodomain (DEN-2 polyprotein) fused to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The invention relates to a novel recombinant or synthetic polypeptide comprising an amino acid sequence that has at least about 90% sequence identity to any of the 20 fully defined amino acid sequences given in the specification. The polypeptide of the invention demonstrates virucide activity and may be useful for inducing an immune response to platviriness (arboviruses group B), including Dengue viruses, as well as in detecting and/or diagnosing the presence of antibodies against the Dengue virus serotypes in a sample and for gene therapy. The current
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
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Pred. No. 0.27;
0; Mismatches
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sequence is that of a Dengue virus C15/truncated prM antigen fusion protein of the invention which comprises the C-terminal 15 amino acids of the capsid protein fused to a truncated form of the prM protein lacking the C-terminal 15 amino acids.
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                                                                                                                                                                                                                                                                                                            virucide; Flavivirus; arboviruses group B; gene therapy; truncated prM;
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                                                                                                                                                                                                                                                                                      Dengue virus type 2 (DEN-2) C15/truncated prM antigen fusion protein.
                                                                                                          Gaps
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Pred. No. 1;
0; Mismatches 1; Indels
                                                                                 Length 167;
                                                                                                         1; Indels
                                                                                  8;
                                                                                  Score 49; DB
Pred. No. 1;
                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Disclosure; SEQ ID NO 118; 409pp; English.
                                                                                                                                                                                                                  ADN37493 standard; protein; 171 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Brinkman AM
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                                                                                    89.1%;
88.9%;
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Best Local Similarity 88.9
Matches 8; Conservative
                                                                        Ouery Match
Best Local Similarity 86.5
المالية 8
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                                                                                                                                                         139 IETWILRHP 147
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                                                                                                                                 1 IETWFLRHP 9
                                                                                                                                                                                                                                                                                                                                                 Dengue virus type 2.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2004-043106/04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (MAXY-) MAXYGEN INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 171 AA;
                                                                                                                                                                                                                                                                                                                                                                         WO2003102166-A2.
                                                             Sequence 167 AA
                                                                                                                                                                                                                                                                                                                          capsid; DEN-2.
                                                                                                                                                                                                                                                               17-JUN-2004
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New recombinant or synthetic polypeptides, and polynucleotides useful for diagnosing, preventing or treating diseases associated with flaviviruses, including dengue viruses.

Brinkman AM;

Punnonen J,

Apt D,

(MAXY-) MAXYGEN INC

WPI; 2004-043106/04

26-FEB-2003, 2003WO-US005918 26-FEB-2002, 2002US-0360030P

WO2003102166-A2.

Dengue virus.

Disclosure; SEQ ID NO 121; 409pp; English

virucide, Flavivirus, arboviruses group B; gene therapy; truncated prM;

Dengue virus C15/truncated prM antigen fusion protein - SEQ

17-JUN-2004

ADN37496;

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ADN37496 standard, protein; 171

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The invention relates to a novel recombinant or synthetic polypeptide comprising an amino acid sequence that has at least about 90% sequence identity to any of the 20 fully defined amino acid sequences given in the specification. The polypeptide of the invention demonstrates virucide activity and may be useful for inducing an immune response to Flaviviruses (arboviruses group B), including Dengue viruses, as well as in detecting and/or diagnosing the presence of antibodies against the Dengue virus servoypes in a sample and for gene therapy. The current sequence is that of a Dengue virus C15/truncated prM antigen fusion protein of the invention which comprises the C-terminal 15 amino acids of the cruminal 15 amino acids of the C-terminal 15 amino acids of
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Pred. No.
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(revised)
(first entry)
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Matches 8; Conservative
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                                                                                                                                                                                                                                                                            Sequence 171 AA;
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25-MAR-2003
02-MAR-1999
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ID AAW7
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DT 25-W
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26-FEB-2002; 2002US-0360030P
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                                                                                     Apt D,
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                                                                                                                                                                                                                                                                                                                                                                            Vazquez Ramudo S, Guzman Tirado G, Guillen Nieto GE, Pardo Lazo OL;
Chinea Santiago G, Perez Diaz AB, Pupo Antunez M, Rodriguez Roche R;
Reyes Acosta O, Garay Perez HE, Padron Palomares G, Alvarez Vera M;
Morier Diaz L, Perez Insuita O, Pelegrino Martinez De La Coterri Pedro,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This protein represents a fusion protein comprising an M protein epitope from Dengue virus type 2 inserted into the P64K protein from Neisseria meningitidis. Synthetic peptides based on the Dengue virus epitope sequences (AAM75404-W75408) and fusion proteins can be used to raise antibodies. The peptides, protein and antibodies are all useful for diagnosis and treatment of Plavivirus infection, e.g. in vaccines. (Updated on 25-WAR-2003 to correct PI field.) (Updated on 17-OCT-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New peptide(s) and fusion proteins useful for diagnosis and treatment of flavivirus infection - contain cross-reactive epitopes from Dengue virus pre-M/M protein and can induce neutralising antibodies.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
Dengue virus; fusion protein; P64K; Neisseria meningitidis; epitope; antibody, diagnosis; Flavivirus; infection; vaccine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  virucide; Flavivirus; arboviruses group B; gene therapy; C15/prM/E; human codon-optimised; prM; envelope; capsid.
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88.9%; Pred. No. 4.3;
ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                               (CIGB-) CIGB CENT ING GENETICA & BIOTECNOLOGIA. (IPKM-) IPK INST MEDICINA TROPICAL KOURI PEDRO.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 7; Page 28-29; 64pp; Spanish
                                                                                                                                                                                                                                  98WO-CU000001.
                                                                                                                                                                                                                                                                         97CU-00000013
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                                                             Dengue virus.
Neisseria meningitidis.
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Best Local Similarity
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                                                                                                                                            WO9831814-A1
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                                                                                                       Chimeric.
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Matches
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The invention relates to a novel recombinant or synthetic polypeptide comprising an amino acid sequence that has at least about 90% sequence identity to any of the 20 fully defined amino acid sequences given in the specification. The polypeptide of the invention demonstrates virucide activity and may be useful for inducing an immune response to Flaviviruses, as well as in detecting and/or diagnosing the presence of antibodies against the bengue virus serotypes in a sample and for gene therapy. The current sequence is that of the Dengue virus C15/prM/E partially human codonoptimised antigen fusion protein of the invention which comprises 15 amino acids of the capsid (C) protein fused to the full-length partially codon-optimised prM protein and envelope (B) protein.
                                                                                                                                                                                                                          New recombinant or synthetic polypeptides and polynucleotides useful for diagnosing, preventing or treating diseases associated with flaviviruses, including dengue viruses.
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88.9%; Pred. No. 4.6;
iive 0; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                           Example 28; SEQ ID NO 253; 409pp; English.
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                                                                Brinkman AM
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Best Local Similarity
8; Conserv?
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                                                                Punnonen J,
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(MAXY-) MAXYGEN INC
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                                                                                                                                                         N-PSDB; ADN37632
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 675 AA;
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         The invention relates to a novel recombinant or synthetic polypeptide comprising an amino acid sequence that has at least about 90% sequence identity to any of the 20 fully defined amino acid sequences given in the specification. The polypeptide of the invention demonstrates virucide activity and may be useful for inducing an immune response to Plaviviruses (arboiruses group B), including Dengue viruses, as well as in detecting and/or diagnosing the presence of antibodies against the Dengue virus serotypes in a sample and for gene therapy. The current sequence is that of the Dengue Virus C15/prM/E antigen fusion protein of the invention which comprises 15 amino acids of the capsid (C) protein fused to the full-length prM protein and envelope (E) protein.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                virucide; Flavivirus; arboviruses group B; gene therapy; C15/prM/E; prM; envelope; capsid.
                                                                                                                                                                                                                                                                                                                         Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Dengue virus C15/prM/E antigen fusion protein - SEQ ID 237.
                                                                                                                                                                                                                                                                                   Score 49; DB 8; Length 675;
                                                                                                                                                                                                                                                                                                                         1; Indels
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0; Mismatches
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88.9%;
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Best Local Similarity 88.33,
Best Local Similarity
8; Conservative
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                               Gaps
                                                                                                                                                                                                                                                                                          virucidė, Flavivirus, arboviruses group B; gene therapy, C15/prM/E;
human codon-optimised; prM; envelope; capsid.
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Pred. No. 4.6;
Score 49; DB 8
Pred. No. 4.6;
0; Mismatches
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                                                                                                                                                                      ADN37626 standard; protein; 675 AA.
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   89.1%;
88.9%;
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Matches 8; Conservative
 Query Match
Best Local Similarity 88.5
Matches 8; Conservative
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                                                                                          139 IETWILRHP 147
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                                                               1 IETWFLRHP 9
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                                                                                                                                                                                                                                                                                                                                         Dengue virus.
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                                                                                                                                                                                                                                                                                                                                                         Synthetic
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AAW75411
ID AAW75
                                                                                                                                         RESULT 17
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The invention relates to a novel recombinant or synthetic polypeptide comprising an amino acid sequence that has at least about 904 sequence identity to any of the 20 fully defined amino acid sequences given in the specification. The polypeptide of the invention demonstrates virucide activity and may be useful for inducing an immune response to Plaviviruses (arboviruses group B), including Dengue viruses, as well as in detecting and/or diagnosing the presence of antibodies against the Dengue virus serctypes in a sample and for gene therapy. The current sequence is that of the Dengue virus CIS/prM/E antigen fusion protein of the invention which comprises 15 amino acids of the capsid (c) protein fused to the full-length prM protein and envelope (E) protein.
                                                                                                                                                                                                                                                                                                             New recombinant or synthetic polypeptides and polynucleotides useful for diagnosing, preventing or treating diseases associated with flaviviruses,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                virucide; Flavivirus; arboviruses group B; gene therapy; DEN-2;
Den-2C15/prM/E; prM; envelope; capsid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Dengue virus type 2 Den-2C15/prM/E antigen fusion protein.
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4.6;
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                                                                                                                                                                                                                                                                                                                                                                                          Example 13; SEQ ID NO 238; 409pp; English
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Pred. No. 4
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                                                                                                                                                                                                                                  Brinkman AM;
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ilarity 88.9%;
Conservative 0
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                                                                                                                                                                                                                                                                                                                                                    including dengue viruses
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                                                                                                                                                                                            (MAXY-) MAXYGEN INC
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les 8, Conserv
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Dengue virus.
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Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Vazquez Ramudo S, Guzman Tirado G, Guillen Nieto GE, Pardo Lazo OL;
Chinea Santiago G, Perez Diaz AB, Pupo Antunez M, Rodriguez Roche R;
Reyes Acosta O, Garay Perez HE, Padron Palomares G, Alvarez Vera M;
Morier Diaz L, Perez Insuita O, Pelegrino Martinez De La Coterri Pedro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This protein represents a fusion protein comprising an M protein epitope from Dengue virus type 4 inserted into the P64K protein from Neisseria meningitidis. Synthetic peptides based on the Dengue virus epitope sequences (AAM75404-W75408) and fusion proteins can be used to raise antibodies. The peptides, protein and antibodies are all useful for diagnosis and treatment of Flavivirus infection, e.g. in vaccines. (Updated on 25-MAR-2003 to correct PI field.) (Updated on 17-OCT-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New peptide(s) and fusion proteins useful for diagnosis and treatment of flavivirus infection - contain cross-reactive epitopes from Dengue virus pre-M/M protein and can induce neutralising antibodies.
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                                                                                                                                                                    Dengue virus, fusion protein, P64K; Neisseria meningitidis; epitope, antibody; diagnosis; Flavivirus; infection; vaccine.
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Pred. No. 4.6;
0; Mismatches 1; Indels
                                                                                                                               Fusion protein PD34 contains Dengue virus epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               (CIGB-) CIGB CENT ING GENETICA & BIOTECNOLOGIA.
(IPKM-) IPK INST MEDICINA TROPICAL KOURI PEDRO.
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88.9%;
                                                                        (revised)
(first entry)
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                                                                                                                                                                                                                                                   Neisseria meningitidis.
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                                                      (revised)
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Best Local Similarity
8; Conserv?
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                                                                                                                                                                                                                                                                                                         WO9831814-A1
                                                                                                                                                                                                                                                                                                                                                                                      13-JAN-1998;
                                                                                                                                                                                                                              Dengue virus
                                                                      25-MAR-2003
02-MAR-1999
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                                                    17-OCT-2003
                                                                                                                                                                                                                                                                                                                                                23-JUL-1998
                                                                                                                                                                                                                                                                   Chimeric.
                AAW75411;
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RESULT 19

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ADN37613
ID ADN3
XX AC ADN3
XX I7-C
XX DE DENC
XX YX YIT-X
XX YX YX XX

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Gaps

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Length 677;

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                                                                                                          The invention relates to a novel recombinant or synthetic polypeptide comprising an amino acid sequence that has at least about 90% sequence identity to any of the 20 fully defined amino acid sequences given in the specification. The polypeptide of the invention demonstrates virucide activity and may be useful for inducing an immune response to Flaviviruses (arboviruses group B), including Dengue viruses, as well as in detecting and/or diagnosing the presence of antibodies against the Dengue virus serotypes in a sample and for gene therapy. The current antigen fusion protein of the invention which comprises 15 amino acids of the capsid (C) protein fused to the full-length prM protein and envelope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New recombinant or synthetic polypeptides and polynucleotides useful for diagnosing, preventing or treating diseases associated with flaviviruses, including dengue viruses.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    aB
        New recombinant or synthetic polypeptides and polynucleotides useful for diagnosing, preventing or treating diseases associated with flaviviruses, including dengue viruses.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         virucide; Flavivirus; arboviruses group B; gene therapy; C15/prM/E; prM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The invention relates to a novel recombinant or synthetic polypeptide comprising an amino acid sequence that has at least about 90% sequence identity to any of the 20 fully defined amino acid sequences given in the specification. The polypeptide of the invention demonstrates virucide activity and may be useful for inducing an immune response to Flaviviruses (arboviruses group B), including Dengue viruses, as well a in detecting and/or diagnosing the presence of antibodies against the
                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Dengue virus C15/prM/E antigen fusion protein - SEQ ID 142.
                                                                                                                                                                                                                                                                                                                                                                  Length 681;
                                                                                                                                                                                                                                                                                                                                                                                                   1; Indels
                                                                                                                                                                                                                                                                                                                                                                  Score 49; DB 8;
Pred. No. 4.6;
                                                                                                                                                                                                                                                                                                                                                                                                     0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 40; SEQ ID NO 142; 409pp; English.
                                                                                Claim 38; SEQ ID NO 228; 409pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADN37517 standard; protein; 681 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Brinkman AM
                                                                                                                                                                                                                                                                                                                                                                   89.1%;
88.9%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26-FEB-2002; 2002US-0360030P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       143 İETWILRHP 151
                                                                                                                                                                                                                                                                                                                                                                                                                                        1 IETWFLRHP 9
                                                                                                                                                                                                                                                                                                                                                   Query Match
Beet Local Similarity
8; Conserve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (MAXY-) MAXYGEN INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Punnonen J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2004-043106/04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             capsid
                                                                                                                                                                                                                                                                                                                                     Sequence 681 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO2003102166-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Dengue virus.
                                                                                                                                                                                                                                                                                                      protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            17-JUN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11-DEC-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                envelope;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADN37517;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Apt D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 21
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Novel isolated nucleic acid useful as vaccine for preventing flavivirus infection, comprises transcriptional unit encoding signal sequence of one flavivirus and immunogenic flavivirus antigen of a second flavivirus.
Dengue virus serotypes in a sample and for gene therapy. The current sequence is that of the Dengue virus C15/prM/E antigen fusion protein of the invention which comprises 15 amino acids of the capsid (C) protein fused to the full-length prM protein and envelope (E) protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            transcriptional unit encoding a signal sequence of a structural protein of a first flavivirus and an immunogenic flavivirus antigen of a second flavivirus, where the transcriptional unit directs the synthesis of the antigen. The polynucleotide of the invention has virucide activity, and acts as a vaccine. A composition of the invention is useful for immunising a subject against infection by a flavivirus. The polynucleotide is useful as a vaccine for preventing flavivirus infection. The sequence represents plasmad pcBD2-14-6, which contains dengue-2 virus (DEN-2) prM and E proteins
                                                                                                                                                                                                                                                                                                                                                                                                 Flavivirus; immunogenic flavivirus antigen; virucide; vaccine; prM-E; pCBD2-14-6; dengue virus; DEN-2.
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                                                                                                                                          Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 685;
                                                                                                           8; Length 681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                        1; Indels
                                                                                                                                                                                                                                                                                                                                                                        Plasmid pCBD2-14-6 containing dengue-2 virus prM and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 49; DB 6;
Pred. No. 4.6;
0; Mismatches
                                                                                                               Score 49; DB 8
Pred. No. 4.6;
0; Mismatches
                                                                                                             DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Example 20; Page 157-158; 174pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (USSH ) US DEPT HEALTH & HUMAN SERVICES
                                                                                                                                                                                                                                                                                 ABP57874 standard; protein; 685 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .
0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          04-APR-2002; 2002WO-US010764
                                                                                                               89.1%;
                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                          Best Local Similarity 88.9
Matches 8; Conservative
                                                                                                                                                                                                      143 İETWILKHP 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
---- 8; Conserve
                                                                                                                                                                         1 IETWFLRHP 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2003-058572/05.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 IETWFLRHP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N-PSDB; ABV77547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 685 AA;
                                                                                  Sequence 681 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Dengue-2 virus.
Chimeric.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200281754-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unidentified
                                                                                                                                                                                                                                                                                                                                             07-FEB-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               17-0CT-2002
                                                                                                                                                                                                                                                                                                                ABP57874;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chang GJ;
                                                                                                                  Query Match
                                                                                                                                                                                                                                                      RESULT 22
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Novel isolated nucleic acid useful as vaccine for preventing flavivirus infection, comprises transcriptional unit encoding signal sequence of one flavivirus and immunogenic flavivirus antigen of a second flavivirus.
                                                                                                                                                                                                                                                                                                                                                                                 The invention relates to a novel nucleic acid comprising a transcriptional unit encoding a signal sequence of a structural protein of a first flavivirus and an immunogenic flavivirus antigen of a second flavivirus, where the transcriptional unit directs the synthesis of the antigen. The polymucleotide of the invention has virucide activity, and acts as a vaccine. A composition of the invention is useful for immunising a subject against infection by a flavivirus. The polymucleotide is useful as a vaccine for preventing flavivirus infection. The sequence represents plasmid pCB9D2-IJ-4-3, which contains dengue-2 virus (DEN-2) prM, M and E, and Japanese encephalitis virus E
  Flavivirus, immunogenic flavivirus antigen, virucide, vaccine, prM-E, pCB9D2-1J-4-3, Japanese encephalitis virus, dengue-2 virus, DEN-2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEN-2; flavivirus; envelope protein; immunisation; vaccine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 685;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 49; DB 6;
Pred. No. 4.6;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Dengue virus serotype 2 PR159/S1 polypeptide.
                                                                                                                                                                                                                                                                                                                                                         Example 20; Page 162-164; 174pp; English.
                                                                                                                                                                                                (USSH ) US DEPT HEALTH & HUMAN SERVICES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        115. .205
/label= Pre-membrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAW09409 standard; protein; 1127 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  206. .280
/label= Membrane
281. .775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1. .114
/label= Capsid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     89.1%;
                                                                                                                                          04-APR-2002; 2002WO-US010764
                                                                                                                                                                      04-APR-2001; 2001US-00826115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Dengue virus; serotype 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    147 İETWILRHP 155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q
                                                                                                                                                                                                                                                       WPI; 2003-058572/05.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 IETWFLRHP
                                                                                                                                                                                                                                                                        N-PSDB; ABV77548.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 685 AA;
                                                                                   WO200281754-A1
                                            Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                17-OCT-2003
19-MAY-1997
                                                                                                              17-0CT-2002
                                                            Synthetic
                                                                                                                                                                                                                            Chang GJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAW09409;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Key
Region
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAW09409
    %XCCCCCCCCCX8%2F1F1X8B2XBX8XBXBXBX88%8%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Novel isolated nucleic acid useful as vaccine for preventing flavivirus infection, comprises transcriptional unit encoding signal sequence of one flavivirus and immunogenic flavivirus antigen of a second flavivirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention relates to a novel nucleic acid comprising a transcriptional unit encoding a signal sequence of a structural protein of a fits flavivirus and an immunogenic flavivirus antigen of a second flavivirus, where the transcriptional unit directs the synthesis of the antigen. The polynucleotide of the invention has virucide activity, and immunising a subject against infection by a flavivirus. The polynucleotide is useful as a vaccine for preventing flavivirus infection. The sequence represents plasmid pCBBD2-2J-2-9-1, which contains dengue-2 virus (DEN-2) prM, M and E, and Japanese encephalitis
                                                                                                                                                                               Flavivirus; immunogenic flavivirus antigen; virucide; vaccine; prM-E; pCB8D2-2J-2-9-1; Japanese encephalitis virus; dengue-2 virus; DEN-2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Example 20; Page 168-169; 174pp; English.
                                                                                                                                                   Plasmid pCB8D2-2J-2-9-1 protein product.
                                                                                                                                                                                                                                                                                                                                                                                 (USSH ) US DEPT HEALTH & HUMAN SERVICES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Plasmid pCB9D2-IJ-4-3 protein product.
                                                                   ABP57876 standard; protein; 685 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ABP57875 standard; protein; 685 AA
                                                                                                                                                                                                                                                                                                                           04-APR-2002; 2002WO-US010764.
                                                                                                                                                                                                                                                                                                                                                      04-APR-2001; 2001US-00826115.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     89.1%;
88.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 88.30,
Best Aconservative
                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
147 IETWILRHP 155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      147 İETWILRHP 155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             σ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                        N-PSDB; ABV77549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                virus E proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 685 AA;
                                                                                                                                                                                                                                                                   WO200281754-A1
                                                                                                                                                                                                                         Unidentified.
                                                                                                                        07-FEB-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     07-FEB-2003
                                                                                                                                                                                                                                                                                             17-0CT-2002
                                                                                                                                                                                                                                          Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                              Chang GJ;
                                                                                               ABP57876;
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                                         RESULT 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 24
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                                                       ABP5787
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Gaps

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proteins of serotype 2 dengue virus toppiu, pin, enveryor 10, aum Noil proteins of serotype 2 dengue virus infection comprises a dimeric 80% E protein protecting against flavivirus infection comprises a dimeric 80% E protein that has been secreted as a recombinant protein from a eukaryotic cell.

80% E indicates a C-terminally truncated flavivirus E protein. The cdimeric truncated E is formed: (1) by directly linking 2 tandem copies of dimeric truncated E is formed: (2) via the formation of a leucine zipper comain through the homodimeric association of 2 leucine zipper helices each fused to the C-terminus of an 80% E molecule; or (3) via the compined of a non-covalently associated four-helix bundle domain formed to upon association of two helix-turn-helix moieties attached to the C-terminus of an 80% E molecule. Dimeric truncated DEN-2 E proteins are efficiently secreted by recombinant cells, are easier to purify than intracellular proteins, and generate a high titer neutralising antibody cresponds. The method is generally applicable to flaviviruses, in cappaness such as DEN-2, where 80% E comprises amino configuration. (Updated on 17-OCT-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                                        Recombinant dimeric flaviviral envelope vaccine - comprising a dimeric 80% protein, useful for protecting against flavivirus, especially dengue virus infections.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This sequence is composed of the capsid, prM, envelope (E) and NS1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Dengue virus; DEN-2; Envelope protein; 80% E; membrane protein; capsid protein; NS1 protein; Dengue haemorrhagic fever; DHF; Dengue shock syndrome; DSS; flavivirus; vaccine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                89.1%; Score 49; DB 2; Length 1127;
88.9%; Pred. No. 7.9;
iive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Dengue virus, DEN-2, capsid/membrane/envelope/NS1 proteins.
                                                                                                                                                                                                                                                                                                                            Coller BG, Mcdonnell M, Harada KE;
                                                                                                                                                                                                                                                                                  (HAWA-) HAWAII BIOTECHNOLOGY GROUP INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Dengue virus type 2; strain PR159/S1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADL98086 standard; protein; 1127 AA.
/label≃ PreMembrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Example 1; Fig 3A-D; 60pp; English.
  206. .280
/label= Membrane
280. .1127
                                                                              /label= Envelope
                                                                                                                                                                                                       98WO-US015447.
                                                                                                                                                                                                                                              97US-00904227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                18-NOV-2004 (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       237 IETWILRHP 245
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                                                                                                                                                                                                                                                                                                                               Peters ID,
                                                                                                                                                                                                                                                                                                                                                                     WPI; 1999-153454/13.
N-PSDB; AAX25114.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 1127 AA;
                                                                                                                                                                                                     27-JUL-1998;
                                                                                                                                                                                                                                              31-JUL-1997;
                                                                                                                         WO9906068-A2
                                                                                                                                                               11-FEB-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADL98086;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                            Ivy JM,
                     Protein
                                                             Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 27
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    g
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A polypeptide (AAW09409) comprises the capsid, pre-membrane, envelope and NS1 proteins of dengue virus serotype 2 (DEN-2) variant PR159/S1. A conservative mutation in the envelope protein may be involved in the attenuation of this small-plaque, tempor sensitive variant. Portions of the envelope protein, esp. domain B, can be expressed in eukaryotic hosts (see also AAW09410 and AAW09427-28) transfected with vectors incorporating DEN-231 cDNA (see also AAT47666). These polypeptides can be used in novel subunit vaccines against viral infection, to raise antibodies useful for passive immunisation, and for diagnosis of infection. (Updated on 17-OCT-2003 to standardise OS field)
                                                                                  'note= "amino acid residue 588 (Val) is Ile in wild-type
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sub:unit vaccine against flavivirus infection - contg. recombinant envelope protein in secretable form, used for immunising against flavivirus infection.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Flavivirus; envelope protein; vaccine; infection; diagnosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             89.1%; Score 49; DB 2; Length 1127;
88.9%; Pred. No. 7.9;
ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                              (HAWA-) HAWAII BIOTECHNOLOGY GROUP INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Example 1; Fig 3A-D; 121pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAY05522 standard; protein; 1127 AA.
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                         296. .395
/label= Domain-B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1. .114
/label= Capsid
115. .205
    /label= Envelope
                                                                                                                                                                                                                                                                                                                                                                                                                                       Nakano E, Clements D;
                                                                                                                                                                                                                                                                                                             95US-00448734.
95US-00488807.
95US-00500469.
                                                                                                                                                                                                                                                                       96WO-US007627
                                                                                                                         776. .1127
/label= NS1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Dengue virus; serotype 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 88.9
Matches 8; Conservative
                                                                                                      PR159"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        237 İETWILRHP 245
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N-PSDB; AAT47666.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 1127 AA;
                                                               Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         17-OCT-2003
05-JUL-1999
                                                                                                                                                                                         WO9637221-A1
                                                                                                                                                                                                                                                                                                                                     07-JUN-1995;
                                                                                                                                                                                                                                                                       24-MAY-1996;
                                                                                                                                                                                                                                                                                                                  24-MAY-1995;
                                                                                                                                                                                                                                                                                                                                                        10-JUL-1995;
                                                                                                                                                                                                                               28-NOV-1996
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                                                                                                                                                                                                                                                                                                                                                                                                                                       IVY JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Protein
                                                                                                                             Region
                           Domain
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Gaps

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ઢ 유 Mcdonell M, Ivy JM, Harada K;

99US-00376463 97US-00904227

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New vaccines for preventing or diagnosing infections caused by dengue virus comprises a therapeutic amount of a dimeric 80%E protein secreted from Drosophila Schneider cells.
                                                                                                                                          (HAWA-) HAWAII BIOTECHNOLOGY GROUP INC.
                                                                                                                                                                                                                                                                                             Example 1; SEQ ID NO 3; 47pp; English.
                                                                                                                                                                     Coller BG,
                                                                                                                                                                                               WPI; 2004-438725/41.
                                                                                                                                                                                                              N-PSDB; ADQ28715
    Dengue virus.
                                                                                                                31-JUL-1997;
                               US6749857-B1
                                                                                     18-AUG-1999;
                                                         15-JUN-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28-NOV-2002.
                                                                                                                                                                     Peters ID,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   invention.
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    0 × 2 × 5 × 8 × 5 × 8 × 8 × 8 × 8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                        The invention relates to a vaccine for protection against Flavivirus infection comprising a dimeric 80% envelope (E), which has been secreted as a recombinantly produced protein from Drosophila Schneider cells and which represents the N-terminal 80% portion of the protein from residue 1-395. Also included are a method for protecting a subject against a flavivirus, an immunogenic polypeptide comprising a dimeric 80% E, an immunogenic composition for protection against Flavivirus infection comprising the immunogenic polypeptide and a carrier, an immunodiagnostic comprising the immunogenic polypeptide and a carrier, an immunodiagnostic for detecting Plavivirus comprising the immunogenic polypeptide and an immunodiagnostic kit for detecting rimmunogenic polypeptide and an immunodiagnostic kit for detecting relavivirus in a test subject. The dimeric 80% E products are envelope proteins of serotypes comprising DEN-1, DEN-2, DEN-3 or DEN-4. The Flavivirus is a dengue virus. The 80% E protein is produced as a dimer by incorporating a helix-turn-helix peptide, to encourage dimerisation. The vaccine is useful for protection against dengue virus infection (e.g. Dengue haemorrhagic fever, DHF, and Dengue shock syndrome, DSS). The present sequence is encoded by the partial genomic sequence of the DEN-2 are an expressents the capatid, membrane, envelope and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                            Vaccine useful for protection against dengue virus infection, comprises a dimeric 80% envelope, which has been secreted as a recombinantly produced protein from Drosophila Schneider cells.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              virucide; vaccine; Flavivirus; dimeric 80%E; Drosophila Schneider cell; immunogenic composition; multivalent immunodiagnostic; dengue virus; viral capsid; prM gene; E gene; NSI gene.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  89.1%; Score 49; DB 7; Length 1127;
88.9%; Pred. No. 7.9;
ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Dengue virus viral capsid, prM, E and NS1 gene polyprotein.
                                                                                                                                                                                                           Mcdonell M, Ivy JM, Harada K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADQ28716 standard; protein; 1127 AA.
                                                                                                                                                                                                                                                                                                                                  Example 1; Fig 3; 31pp; English.
                                                      20-SEP-2002; 2002US-00247960.
                                                                                  97US-00904227
                                                                                               99US-00376463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity 88.9
nes 8; Conservative
                                                                                                                                                                                                           Peters ID, Coller BG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 237 İETWILRHP 245
                                                                                                                       (PETE/) PETERS I D. (COLL/) COLLER B G. (MCDV) MCDONELL M. (IVYJ/) IVY J M. (HARA/) HARADA K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 IETWFLRHP 9
                                                                                                                                                                                                                                  WPI; 2003-898503/82.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 1127 AA;
                                                                                                                                                                                                                                                     N-PSDB; ADL98085
 US2003175304-A1
                                                                                31-JUL-1997;
18-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26-AUG-2004
                           18-SEP-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADQ28716;
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neutralising antibody response to a Flavivirus in a murine host. The response comprises a therapeutic amount of a dimeric 80%E, the dimeric 80%E that dimeric 80%E that dimeric 80%E that schools a recombinantly produced protein from Prosophila Schneider cells, and where 80%E represents the N-terminal 80% portion of the protein from residues 1-395. Also described are: an immunogenic polypeptide comprising the dimeric 80%E cited above; an immunogenic composition that generates a protective, neutralising antibody response to a Flavivirus in a murine host, comprising the above immunogenic polypeptide and a physiological carrier; a multivalent immunogenic for the detection of Flavivirus, comprising at least 2 of the above immunogenic of properties of a least 2 flavivirus in a test subject, comprising the above immunogenic or multivalent immunodiagnostic kit for the detection of Flavivirus in a test subject, comprising the above immunogenic or multivalent immunodiagnostic composition is useful for preventing or diagnosting infections caused by dengue virus. This is the amino acid sequence of the polyprotein conceeded by Dengue virus gene virus gene virus gene virus gene virus gene virus gene virus gene virus gene virus gene virus for the concept by DEN-2 genes for the immunodiagnostic concept by DEN-2 genes for the immunodiagnostic concept by DEN-2 genes for the immunodiagnostic concept by DEN-2 genes for the immunodiagnostic concept by DEN-2 genes for the immunodiagnostic concept by DEN-2 genes for the immunodiagnostic concept by DEN-2 genes for the immunodiagnostic concept by DEN-2 genes for the immunodiagnostic concept by DEN-2 genes for the concept by DEN-2 genes for the concept by DEN-2 genes for the concept by DEN-2 genes for the concept by DEN-2 genes for the concept by DEN-2 genes for the concept by DEN-2 genes for the concept by DEN-2 genes for the concept by DEN-2 genes for the concept by DEN-2 genes for the concept by DEN-2 genes for the concept by DEN-2 genes for the concept by DEN-2 genes for the concept 
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;
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The invention describes a vaccine that generates a protective,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Attenuation; growth; vaccine; infection; Dengue virus type 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 49; DB 8; Length 1127; Pred. No. 7.9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Dengue virus type 2 strain rDEN2/4delta30 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAE35314 standard; protein; 3388 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  89.1%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity 88.9
Matches 8, Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO200295075-A1
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dengue serotype2.rag

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/label= N-glycosylated
2493. .3391
/label= NS5
                                                                                                                                                                                                                                                                                                                                                                       /label= N-glycosylated
                                                                                                                             label= N-glycosylated
.475. .2093
label= NS3
                                                                                                                                                                                                           label= N-glycosylated
                                                                                                                                                                                                                              'label= N-glycosylated
                                                                                                                                                                                                                                                  'label= N-glycosylated
                                                                                                                                                                                                                                                                                                             'label= N-glycosylated
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       label = N-glycosylated
                                                label= N-glycosylated
                                                                    label= N-glycosylated
                                                                            1329
/label= N-glycosylated
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                                                                                                 1346. .1474
/label= NS2B
                                                                                                                                                           1094. .2243
                                                                                                                                                                               244. .2492
/label= NS4B
                  1128. .1345
'label= NS2A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (INSP ) INST PASTEUR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1991-225002/31.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 3391 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N-PSDB; AAQ12787
                                                                                                                                                                                                                                                                                                     Modified-site
                                                                                                                                                                                                                                                                                                                        Modified-site
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                                                                                                                    Modified-site
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Modified-site
                                      Modified-site
                                                          Modified-site
                                                                              Modified-site
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                                                                                                                                                                                                                                                                                                                                                                                             FR2654113-A.
                                                                                                                                                                                                                                                                                                                                                                                                                 10-MAY-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Vincent D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                 Protein
                  Protein
                                                                                                  Protein
                                                                                                                                        Protein
                                                                                                                                                            Protein
                                                                                                                                                                                Protein
 ö
                                                                                                                                                                                        The present invention relates to novel mutated flaviviruses comprising a phenotype in which the viral genome is modified by introduction of a mutation, singly or in combination, taken from mutations from recombinant virus bearing Vero adaptation mutations, putative Vero cell adaptation mutations of dengue type 4 virus (DEN4) or mutations known to attenuate dengue type 4 virus. The methods and compositions of the invention are useful for fine tuning the attenuation and growth characteristics of dengue virus vaccines for the prevention and/or treatment of dengue virus infection. The present sequence is Dengue virus type 4 strain rDEN2/4delta30 protein
                                                                                                                                 growth
                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                               New mutated flavivirus, useful for fine tuning the attenuation and characteristics of dengue virus vaccines for the prevention and/or treatment of dengue virus infection.
                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           dengue virus; detection; consensus sequence; Flavivirus; PCR.
                                                                                                                                                                                                                                                                                                                         Score 49; DB 6; Length 3388;
Pred. No. 26;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Proteins encoded by entire Dengue 2 virus genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /label= N-glycosylated
206. .280
/label= M
281. .775
/label= E
                                                                                                                                                                         Disclosure; Page 133-134; 246pp; English
                                                   (USSH ) US DEPT HEALTH & HUMAN SERVICES.
(BLAN/) BLANEY J E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /label= N-glycosylated
776. .1127
/label= NS1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        905
/label= N-glycosylated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       label= N-glycosylated
                                                                                Hanley KA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
116. .205
/label= prM
                                                                                                                                                                                                                                                                                                                                                                                                                                        AAR13166 standard; protein; 3391 AA.
                                                                                                                                                                                                                                                                                                                            89.18;
                                22-MAY-2001; 2001US-0293049P
             22-MAY-2002; 2002WO-US016308
                                                                                                                                                                                                                                                                                                                                    88.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (revised)
(first entry)
                                                                                   Whitehead SS, Murphy BR,
                                                                                                                                                                                                                                                                                                                                                8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                   237 IETWILRHP 245
                                                                                                                                                                                                                                                                                                                                                                    1 IETWFLRHP 9
                                                                                                    WPI; 2003-120809/11.
N-PSDB; AAD53912.
                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
Matches 8; Conserv
                                                                                                                                                                                                                                                                                                         Sequence 3388 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Dengue virus
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21-NOV-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAR13166;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Peptide
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ID AAR1
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Detection and identification of Flaviviridae in biological sample - by amplifying consensus sequence then hybridisation opt. followed by typing. e.g. sequencing amplified prod.
                                                                                                                                                                                                         The dengue 2 virus is an example of a member of the Flaviviridae which can be identified using the probe pair of the invention. A species-specific sequence can be amplified using the claimed obligonucleotides as primers in a PCR reaction (see AAQ12788 and AAQ12789). Other viruses which can be identified include Japanese encephalitis virus and yellow fever virus. All the dengue 2 virus proteins are encoded from an
                                                                                                                                                                                                                                                                                                                                                       fever virus. All the dengue 2 virus proteins are encoded from an uninterrupted genomic sequence. (Updated on 25-MAR-2003 to correct PR field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 3391;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 2;
26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 49;
Pred. No.
                                                                                                                                                         Disclosure; Fig 3; 24pp; French
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                89.1%;
88.9%;
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8; Conservative 0; Mismatches 1; Indels 0; Gaps 1 IETWFLRHP 9 |||| |||| 237 IETWILRHP 245 Matches ò g

Search completed: August 31, 2006, 11:50:37 Job time : 110.25 secs

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glycoprotein gpV - probable protein k colorectal cancer hypothetical prote	conserved hypothe probable transpor	structural polypro antiblotic synthet DNA-directed DNA p tumor suppressor b	genome polyprotein splicing factor PR	genome polyprotein hypothetical prote conserved hypothet	lipoate-protein li nifM protein - Kle	probable tumor sup LysR-family regula	nitrite reductase hypothetical prote	nitrite reductase acetylornithine de deoxyribodiovrimid	Ecos type I restri glycinin G5 precur	interleukin-10 rec hypothetical prote	probable RING zinc hypothetical prote	ATP-dependent heli DNA gyrase subunit	probable receptor hypothetical prote	PBSX prophage ORF rudimentary protei	hypothetical oxido	aryl-alcohol dehyd aryl-alcohol dehyd	hypothetical prote	hypothetical prote	hypothetical prote	glycoprotein D pre glycoprotein aD -	hypothetical prote	nypornerical prote EcoA system protei	hypothetical prote	pvcA protein VC194	hypothetical prote oxysterol-binding	hypothetical profe	dynein heavy chain hypothetical prote	hypothetical prote	hypothetical prote conserved hypothet	hypothetical prote	conserved hypothet hypothetical prote	conserved hypothet	hypothetical prote	hypothetical prote	يد پد	
560 1 VGBE14 1155 2 B96761 144 2 B40098 301 2 C95872	000	9000	ч 2 -	- 00 0	0 0	0 0	000	v 0 0	7 7	0,0	0,0	00	000	~ ~ ~	100	200	9 70 6	4 (4 (7 77	7	0	v ~	٥ ر	4 ~	~ ~	~	2 2	~	~ ~	9 00 0	~ ~	~	0 C	9 (7	0 0	
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3331	38.6	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	0 4 4 4 6 0 6 0 6 0 6 0 6 0 6 0 6 0 6 0	4 4 9 W 4	4 4 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	47	0.00 to 0.00 t	53	50.00	56	598	61	63.2	4 C A	62	2001	712	73	75	76	78	80	81	83 8	8 89 8 52	98	88	68	90	92	93	95	96	86	100	
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.1.9 iocceleration Ltd.		Search time 17.25 Seconds (without alignments) 50.200 Million cell updates/s		·		•	parameters: 283416							results predicted by chance to have a	istribution.		20. 140. 170. 200.		genome polyprotein	polyprotein - deng qenome polyprotein	genome polyprotein	genome polyprotein	polyprotein - deng membrane protein -	membrane protein -	genome polyprotein · polyprotein(C, E,	genome polyprotein	enome per	enome I	enome 1	4 14 1	enome embran	hypothetical prote	hypothetical prote probable protein m	hypothetical 23.0K		genome polyprotein carboxypeptidase-1

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Pred. No. 5.4;
0; Mismatches
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Matches 8; Conservative
                                                                                                                                                                                                               Query Match
Best Local Similarity 88.9
Matches 8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Molecule type: genomic RNA A; Residues: 1-3388 < HAH>
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|ETWILRHP 245
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A;Status: preliminary
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A48644
polyprotein - dengue virus type 2 (strain Mexican) (fragment)
C;Species: dengue virus type 2
C;Species: dengue virus type 2
C;Date: 07-Apr-1994 #sequence_revision 07-Apr-1994 #text_change 31-Dec-2004
C;Accession: A48644
R;Ruiz, B.H.; Sanchez, I.; Ortega, G.J.; Lopez, I.; Ortiz-Ortiz, L.
submitted to GenBank, October 1992
A;Pescription: Nucleotide sequence and deduced amino-acid sequence of the structural pro
A;Reference number: A48644
A;Accession: A48644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A, molecule type: genomic RNA
A, Residues: 1-555 <SH1>
A, Residues: 1-555 <SH1>
A, Residues: 1-555 <SH1>
A, Residues: 1-555 <SH1>
A, Residues: 1-555 <SH1>
A, Cross-references: UNIPROT: P29984, UNIPARC: UPI0000131DF8, GB: D10514; DDBJ: D01074; NID: G, Superfamily: hepatitis C virus genome polyprotein
C, Reywords: envelope protein; glycoprotein; nonstructural protein; polyprotein; transment
F;1-49/Froduct: membrane-associated protein M (fragment) #status predicted <MEM>
F;3-51/Domain: transmembrane #status predicted <TM1>
F;30-544/Froduct: envelope protein E #status predicted <NV>
F;496-512/Domain: transmembrane #status predicted <TM2>
F;50-544/Domain: transmembrane #status predicted <TM3>
F;55-555/Product: nonstructural protein N31 (fragment) #status predicted <NON>
F;545-555/Product: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          genome polyprotein - dengue virus type 2 (strain TH-36) (fragment)
N;Contains: envelope procein E; membrane-associated protein M; nonstructural protein NS1
C;Species: dengue virus type 2
C;Species: dengue virus type 2
C;Accession: 30.5ep-1993 #sequence_revision 30-Sep-1993 #text_change 31-Dec-2004
C;Accession: 301404
R;Shiu, S:Y.W.; Jiang, W.R.; Porterfield, J.S.; Gould, E.A.
J;Gen. Virol. 73, 207-212, 1992
A;Title: Envelope protein sequences of dengue virus isolates TH-36 and TH-Sman, and ider A;Reference number: 301404; MUID:92113574; PMID:1339466
                                                                                                                                                                                                                                                                                                                                                                                                  A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-166 <SHI>
A;Cross-references: UNIPROT:Q66346; UNIPARC:UPI00000F6DD9; EMBL:X72849; NID:g437772; PIC
C;Superfamily: hepatitis C virus genome polyprotein
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                                                                                                                            premembrane protein - dengue virus type 2
C;Species: dengue virus type 2
C;Date: 06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change 31-Dec-2004
C;Accession: S40144
R;Shiu, S.Y.W.
Bubmitted to the EMBL Data Library, May 1993
A;Reference number: S40144
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88.9%; Pred. No. 0.84;
ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 89.1%; Score 49; DB 2; Length 166; Best Local Similarity 88.9%; Pred. No. 0.24; Matches 1; Indels Matches 1; Indels
   ALIGNMENTS
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Best Local Similarity. 88.9
Matches 8; Conservative
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123 IETWILRHP 131
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IETWILRHP 14
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S40144
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A;Molecule type: genomic RNA
A;Residues: 1-775 <RUI>
A;Cross-references: UNIPROT:Q66398; UNIPARC:UPI00000EEE45; GB:L04561; NID:g323652; PIDN:7
C;Superfamily: hepatitis C virus genome polyprotein
C;Keywords: polyprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 generate polyprotein - dengue virus type 2 (strain PRIS9/S1)
N;Contains: capsid protein; envelope protein; membrane protein; nonstructural protein NS1
N;Contains: capsid protein NS4b; nonstructural protein NS5
C;Species: dengue virus type 2
C;Species: dengue virus type 2
C;Date: 30-Jun-1989 #text_change 31-Dec-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      F;2091-2376/Product: nonstructural protein NS4a #status predicted <N4A>
F;2377-2488/Product: nonstructural protein NS4b #status predicted <N4B>
F;2489-3388/Product: nonstructural protein NS5 #status predicted <NS5>
F;183,347,433,905,982,1134,1174,1329,1369,2298,2302,2384,2454,2482,2641,2662,2701,2711/Ba
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N.Contains: capsid protein C; envelope protein B; membrane-associated protein M; nonstructural protein NS4a; nonstructural protein NS4b; nonstructural protein NS5
C;Species: dengue virus type 2
C;Date: 31-Dec-1992 #sequence revision 31-Dec-1992 #text_change 31-Dec-2004
C;Accession: A42451; A43496; A43763
C;Accession: A42451; A43496; A43763
A;Pitle: Comparison of a dengue-2 virus and its candidate vaccine derivative: sequence r. A;Reference number: A42451; MUID:92188532; PMID:1312269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R;Hahn, Y.S.; Galler, R.; Hunkapiller, T.; Dalrymple, J.M.; Strauss, J.H.; Strauss, E.G. Virology 162, 167-180, 1988
A;Title: Nucleotide sequence of dengue 2 RNA and comparison of the encoded proteins with A;Reference number: A29972; MUID:88101365; PMID:2827375
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                                                                                                                                                                                                       Score 49; DB 2; Length 775; Pred. No. 1.2; 0; Mismatches 1; Indels
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0; Mismatches
nucleotide-binding motif
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88.9%;
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Best Local Similarity 88.9
Matches 8; Conservative
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A; Residues: 1-791 <DE1>
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Wiconcians: capaid protein C; envelope protein B; membrane-associated protein M; nonstructural protein Nsq a; nonstructural protein NSq b; nonstructural protein NSq b; nonstructural protein NSq b; nonstructural protein NSq b; nonstructural protein NSq b; nonstructural protein NSq b; nonstructural protein NSq b; nonstructural protein NSq b; nonstructural protein NSq b; nonstructural protein NSq b; nonstructural protein NSq b; nonstructural protein NSq b; nonstructural protein N; nonstructural protein N; nonstructural protein N; nonstructural protein N; nonstructural protein N; nonstructural protein; nonstructural protein; nonstructural protein; nonstructural protein; nonstructural protein; nonstructural protein; nonstructural protein; nonstructural protein; nonstructural protein; nonstructural protein; nonstructural protein; nonstructural protein; nonstructural protein; nonstructural nonstructural nonstructural protein N #status predicted ANDA P; nonstructural nonstructural protein N #status predicted ANDA P; nonstructural nonstructural protein NSQ #status predicted ANDA P; nonstructural protein NSQ #status predicted ANDA P; nonstructural protein NSQ #status predicted ANDA P; nonstructural protein NSQ #status predicted ANDA P; nonstructural protein NSQ #status predicted ANDA P; nonstructural protein NSQ #status predicted ANDA P; nonstructural protein NSQ #status predicted ANDA P; nonstructural protein NSQ #status predicted ANDA P; nonstructural protein NSQ #status predicted ANDA P; nonstructural protein NSQ #status predicted ANDA P; nonstructural protein NSQ #status predicted ANDA P; nonstructural protein NSQ #status predicted ANDA P; nonstructural protein NSQ #status predicted ANDA P; nonstructural protein NSQ #status predicted ANDA P; nonstructural protein NSQ #status predicted ANDA P; nonstructural protein NSQ #status predicted ANDA P; nonstructural protein NSQ #status predicted ANDA P; nonstructural protein NSQ #status predicted ANDA P; nonstruc
    A; Residues: 1-3391 cBLO>
A; Cross-references: UNIPROT: P29990; UNIPARC:UPIO000131DF5; GB:M84727; GB:M85259; NID:g32
C; Superfamily: hepatitis C virus genome polyprotein
C; Superfamily: hepatitis C virus genome polyprotein
C; Superfamily: hepatitis C virus genome polyprotein
C; Superfamily: hepatitis C virus genome polyprotein; glycoprotein; nonstructural protein;
C; Superfamily: hepatitis C virus genome polyprotein; nonstructural protein M precursor #status predicted cMPP>
F;115-280/Product: membrane-associated protein M precursor #status predicted cMPP>
F;115-280/Product: membrane-associated protein M #status predicted cMPM>
F;268-280/Product: monterminal signal B #status predicted cMPP>
F;268-280/Product: envelope protein E #status predicted cMP>
F;268-284/Domain: transmembrane #status predicted cMP>
F;277-743/Domain: transmembrane #status predicted cMP>
F;277-743/Domain: transmembrane #status predicted cMP>
F;775-1127/Product: nonstructural protein NS1 #status predicted cNS3>
F;176-1137/Product: nonstructural protein NS2 #status predicted cNS3>
F;168-1675/Region: nucleotide-binding motif A (P-loop)
F;175-1760/Region: nucleotide-binding motif A (P-loop)
F;175-1760/Region: nucleotide-binding motif B #status predicted cN4A>
F;2244-2243/Product: nonstructural protein NS4 #status predicted cN4A>
F;2244-2243/Product: nonstructural protein NS4 #status predicted cN4A>
F;244-2491/Product: nonstructural protein NS5 #status predicted cN4A>
F;244-2491/Product: nonstructural protein NS5 #status predicted cN4A>
F;244-2491/Product: nonstructural protein NS5 #status predicted cN4A>
F;244-2491/Product: nonstructural protein NS5 #status predicted cN55>
F;183,347,433/Binding site: carbohydrate (Asn) (covalent) #status predicted
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Pred. No. 5.4;
0; Mismatches 1; Indels
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Matches 8; Conservative
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Fig. 1994-224/Froduct: nonstructural protein NS4a #status predicted <NAA>
Fi2094-224/Froduct: nonstructural protein NS4a #status predicted <NAA>
Fi2148-2164/Domain: transmembrane #status predicted <TMC>
Fi2174-2190/Domain: transmembrane #status predicted <TMD>
Fi2197-2211/Domain: transmembrane #status predicted <TMB>
Fi227-2241/Domain: transmembrane #status predicted <TMB>
Fi228-224-2491/Product: nonstructural protein NS4b #status predicted <NAB>
Fi235-2368/Domain: transmembrane #status predicted <TMG>
Fi211-247/Domain: transmembrane #status predicted <TMG>
Fi241-247/Domain: transmembrane #status predicted <TMG>
Fi241-247/Domain: transmembrane #status predicted <TMG>
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Fi241-247/Domain: transmembrane #status predicted <TMG>
Fi241-247/Domain: transmembrane #status predicted <TMG>
Fi241-247/Domain: transmembrane #status predicted <TMG>
Fi248-331/Product: nonstructural protein NSS #status predicted <NSS>
Fi183,347,433,905,982,1134,1174,1329,2301,2305,2346,2387,2457,2485,2644,2665,2704,2714/B
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N/Contains: capsid protein C; envelope protein B; membrane-associated protein M; nonstru
Lural protein NS44; nonstructural protein NS4b; nonstructural protein NS5
C;Date: 30-Sep-1989 #sequence_revision 30-Sep-1989 #text_change 31-Dec-2004
C;Date: 30-Sep-1989 #sequence_revision 30-Sep-1989 #text_change 31-Dec-2004
R;Deubel, V, Kinney, R.M.; Trent, D.W.
Virology 155, 365-377, 1986
A;Title: Nucleotide sequence and deduced amino acid sequence of the structural proteins
A;Reference number: A94346; MUID:87071658; PMID:3024394
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Virology 165, 234-244, 1988
A;Title: Nucleotide sequence and deduced amino acid sequence of the nonstructural protei
A;Title: number: A94378; WUD:88265864; PMID:3388770
A;Accession: A94378
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A.Residues: 792-3391 < DE2>
A.Residues: 792-3391 < DE2>
A.Cross-references: UNIPARC:UPI0000174A05; GB:M20558
C.Superfamily: hepatitis C virus genome polyprotein
C.Reywords: ATP; capsid protein; envelope protein; glycoprotein; nonstructural protein;
C.Reywords: ATP; capsid protein C #status predicted < CPC>
F.2114/Product: capsid protein C #status predicted < CPC>
F.35/Domain: transmembrane #status predicted < TM1>
F.101-117/Domain: transmembrane #status predicted < TM2>
F.115-280/Product: membrane-associated protein M precursor #status predicted < MPP>
F.115-280/Product: membrane-associated protein M precursor #status predicted < MPP>
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Pred. No. 5.4;
0; Mismatches
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Pred. No.
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Gaps

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Length 166 1; Indels

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C;Species: dengue virus type 2
C;Date: 12-Feb-1993 #sequence_revision 12-Feb-1993 #text_change 31-Dec-2004
C;Accession: S09223;
Nucleic Acids Res: 18, 1905 1990
A;Title: Nucleotide and encoded amino acid sequences of the membrane protein precursor ar agic fever, dengue shock syndrome or dengue fever.
A;Reference number: S09223; MUID:90245599; PMID:2336374
                                                                                                                                                                    A;Cross-references: UNIPROT:Q67423; UNIPARC:UPI00000F3200; EMBL:X51713; NID:g59309; PIDN C;Superfamily: hepatitis C virus genome polyprotein C;Keywords: membrane protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                membrane protein - dengue virus type 2 (strain M3) (fragment)
A;Reference number: S09223; MUID:90245599; PMID:2336374 A;Accession: S09223 A;Molecule type: genomic RNA A;Residues: 1-166 <SAM>
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Pred. No. 0.8;
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Best Local Similarity 77.8%;
Matches 7; Conservative
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Best Local Similarity 77.8
Matches 7; Conservative
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A;Residues: 1-166 <SAM>
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123 IQTWILRHP 131
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123 IDTWILRHP 131
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Best Local Similarity
Matches 7; Conserv
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S09225
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polyprocein - dengue virus type 2 (strain New Guinea-C)
polyprocein - dengue virus type 2 (strain New Guinea-C)
N;Contains: capsid protein; NS4B; nonstructural protein NS5
C;Species: dengue virus type 2
C;Species: dengue virus type 2
C;Species: dengue virus type 2
C;Species: 30-Jun-1992 #sequence_revision 30-Jun-1992 #text_change 31-Dec-2004
C;Accession: J050219; A26646
R;Irie, K.; Mohan, P.M.; Sasaguri, Y.; Putnak, R.; Padmanabhan, R.
G;Accession: 3050219
A;Molecule type: genome analysis of cloned dengue virus type 2 genome (New Guinea-C strain).
A;Reference number: J50219; MUID:89232751; PMID:2714651
A;Accession: 3050219
A;Molecule type: genomic RNA
A;Accession: 3050219
A;Molecule type: genomic RNA
A;Residues: 1-3391 cIRI>
A;Residues: 1-3391 cIRI>
A;Cross reference: UNIPROT:Q94RT2; UNIPROT:Q94DA3; UNIPROT:Q94BD4; UNIPROT:Q92BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94BD5; UNIPROT:Q94
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A; Molecule type: genomic RNA
A; Residues: 749-1277 - PUTA
A; Residues: 749-1277 - PUTA
A; Residues: 749-1277 - PUTA
A; Residues: 749-1277 - PUTA
A; Residues: 749-1277 - PUTA
A; Cross-references: UNIPARC: UPTO000178549
C; Keywords: ATP: envelope protein; glycoprotein; nonstructural protein; nucleotide bindi
F; 2-114/Froduct: membrane glycoprotein #status predicted <MENA
F; 206/Product: membrane glycoprotein #status predicted <MENA
F; 206-206/Product: membrane glycoprotein #status predicted <MENA
F; 206-775/Product: envelope protein #status predicted <TM1>
F; 775-1177/Product: nonstructural protein NS1 #status experimental <NS1>
F; 1128-1146/Domain: transmembrane #status predicted <TM2>
F; 1146-1177/Product: nonstructural protein NS2 #status predicted <NS2>
F; 1146-1177/Product: nonstructural protein NS2 #status predicted <NS3>
F; 1146-1177/Product: nonstructural protein NS2 #status predicted <NS3>
F; 1146-1175/Product: nonstructural protein NS2 #status predicted <NS3>
F; 1146-1175/Product: nonstructural protein NS2 #status experimental <NS3>
F; 1166-1175/Product: nonstructural protein NS2 #status predicted <NS3>
F; 1176-1176/Region: nucleotide-binding motif A (P-loop)
F; 1759-1762/Region: DEAH motif
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F;2380-2491/Product: nonstructural protein NS48 #status predicted <N4B>
F;2492-3391/Product: nonstructural protein NS5 #status experimental <NS5>
F;183,905,982,2305,2457,2704/Binding site: carbohydrate (Asn) (covalent) #status experim
F;347,433,1134,1174,2301,2485,2665,2714/Binding site: carbohydrate (Asn) (covalent) #sta
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Pred. No. 5.4;
0; Mismatches
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Best Local Similarity
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C;Keywords: envelope protein; glycoprotein; nonstructural protein; polyprotein; transmemi
C;Keywords: envelope protein; glycoprotein; nonstructural protein; polyprotein; transmemicane associated protein M (fragment) #status predicted «PMA»
F;30-534/Product: envelope protein E #status predicted «FNA»
F;46-512/Domain: transmembrane #status predicted «TMA»
F;26-542/Domain: transmembrane #status predicted «TMA»
F;55-555/Product: nonstructural protein NSI (fragment) #status predicted «NON»
F;545-555/Product: nonstructural protein NSI (fragment) #status predicted
F;116,202,521/Binding site: carbohydrate (Asn) (covalent) #status predicted
A;Cross-references: UNIPROT;Q67421; UNIPARC:UPI00000EFFA4; EMBL:X51711; NID:g59305; PIDN C;Superfamily: hepatitis C virus genome polyprotein
C;Keywords: membrane protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A,Cross-references: UNIPROT:P29983; UNIPARC:UP10000131DF0; GB:D10513; DDBJ:D01073; NID:G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     genome polyprotein - dengue virus type 1 (strain TH-Sman) (fragment)
N;Contains: envelope protein E; membrane-associated protein M; nonstructural protein NS1
C;Species: dengue virus type 1
C;Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 31-Dec-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C;Accession: JO1405
R;Shiu, S.Y.W.; Jiang, W.R.; Porterfield, J.S.; Gould, B.A.
J. Gen. Virol. 73, 207-212, 1992
A;Title: Envelope protein sequences of dengue virus isolates TH-36 and TH-Sman, and A;Reference number: JQ1404; MUID:92113574; PMID:1339466
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Pred. No. 2.8;
1; Mismatches 1; Indels
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0.8;
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Pred. No. 0.8;
1; Mismatches
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genome polyprotein - dengue virus type 1 (strain AHF 82-80) (fragment)
Noontains: cappid protein C; envelope protein B; membrane-associated protein M; nonstru
C;Species: dengue virus type 1
C;Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 31-Dec-2004
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C;Keywords: capsid protein; envelope protein; glycoprotein; capsid protein; protein; glycoprotein
C;Keywords: capsid protein; envelope protein; glycoprotein; ponstructural protein; polyp
C;Keywords: capsid protein C #status predicted <CPC>
F;1-114/Product: capsid protein C #status predicted <CPC>
F;46-67/Domain: transmembrane #status predicted <TM2>
F;102-118/Domain: transmembrane #status predicted <TM2>
F;115-280/Product: membrane-associated protein M #status predicted <SIG>
F;206-280/Product: membrane-associated protein M #status predicted <MPM>
F;206-280/Domain: transmembrane #status predicted <TM3>
F;206-280/Domain: transmembrane #status predicted <TM4>
F;215-75/Domain: transmembrane #status predicted <EPE>
F;215-735/Domain: transmembrane #status predicted <TM6>
F;25-773/Domain: transmembrane #status predicted <TM6>
F;25-773/Domain: transmembrane #status predicted <TM6>
F;25-773/Domain: transmembrane #status predicted <TM6>
F;25-773/Domain: transmembrane #status predicted <TM6>
F;75-773/Domain: transmembrane #status predicted <TM6>
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F;75-773/Domain: transmembrane #status predicted <TM6>
F;75-77
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Kontains: capsid protein C; envelope protein B; membrane-associated protein M; nonstru.
C;Species: dengue virus type 1
C;Pate: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 31-Dec-2004
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C;Superfamily: hepatitis C virus genome polyprotein
C;Superfamily: hepatitis C virus genome polyprotein;
C;Superfamily: hepatitis C virus genome polyprotein;
C;Superfamily: hepatitis C virus genome polyprotein;
C;Superfamily: hepatitis C virus genome protein;
C;Superfamily: ransmembrane #status predicted <CPC>
F;46-67/Domain: transmembrane #status predicted <TM2>
F;102-118/Domain: transmembrane #status predicted <TM3>
F;115-208/Domain: nonterminal signal sequence #status predicted <STG>
F;115-208/Product: membrane-associated protein M #status predicted <MPM>
F;115-208/Domain: transmembrane #status predicted <TM3>
F;266-280/Product: envelope protein E #status predicted <EPE>
F;286-281/Domain: transmembrane #status predicted <TM4>
F;266-281/Domain: transmembrane #status predicted <TM5>
F;267-280/Domain: transmembrane #status predicted <TM6>
F;267-2773/Domain: transmembrane #status predicted <TM6>
F;757-773/Domain: transmembrane #status predicted <TM6>
F;757-773/Domain: dransmembrane #status predicted <TM6>
F;757-773/Domain: dransmembrane #status predicted <TM6>
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F;757-773/Domain: dransmembrane #status predicted <TM6>
F;757-773/Domain: dransmembrane #status predicted <TM6>
F;757-773/Domain: dransmembrane #status predicted <TM6>
F;183,347,433/Binding site: carbohydrate (Asn) (covalent) #status predicted
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R;Chu, M.C.; O'Rourke, E.J.; Trent, D.W.
J. Gen. Virol. 70, 1701-1712, 1989
A;Title: Genetic relatedness among structural protein genes of dengue 1 virus strains.
A;Reference number: A32401; MUID:89293078; PMID:2738579
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R;Chu, M.C.; O'Rourke, E.J.; Trent, D.W.
J. Gen. Virol. 70, 1701-1712, 1989
A;Tile: Genetic relatedness among structural protein genes of dengue 1 virus strains.
A;Reference number: A32401; MUID:89293078; PMID:2738579
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F;10,183,347,433/Binding site: carbohydrate (Asn) (covalent) #status predicted
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A;Residues: 1-792 <CHU>
A;Cross-references: UNIPROT:P27912; UNIPARC:UPI000017854E; GB:D00501
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Pred. No. 4;
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Best Local Similarity 77.0.
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A; Residues: 1-792 <CHU>
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237 VETWALRHP 245
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polyprotein(C, E, M, prM) - dengue virus type I (fragment)
C; Species dengue virus type I (fragment)
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A; Molecule type: genomic RNA
A; Molecule type: genomic RNA
A; Residues: 1-792 < CHU>
A; Cross = references: UNIPARC: UP1000017854F; GB: D00501
A; Cross = references: UNIPARC: UP1000017854F; GB: D00501
C; Superfamily: hepatitis C virus genome polyprocein
C; Superfamily: hepatitis C virus genome polyprocein
C; Keywords: capsid protein C #status predicted < CPC>
F; 1-114/Product: capsid protein C #status predicted < CPC>
F; 102-118/Domain: transmembrane #status predicted < TM1>
F; 102-118/Domain: unonterminal signal sequence #status predicted < SIG>
F; 115-280/Product: membrane-associated protein M #status predicted < MPM>
F; 244-263/Domain: transmembrane #status predicted < TM3>
F; 266-280/Product: envelope protein B #status predicted < TM4>
F; 241-263/Domain: transmembrane #status predicted < TM5>
F; 256-290/Product: envelope protein B #status predicted < CM5>
F; 257-775/Domain: transmembrane #status predicted < TM5>
F; 2775/Domain: transmembrane #status predicted < TM5>
F; 2775/Domain: transmembrane #status predicted < TM5>
F; 2775/Domain: transmembrane #status predicted < TM5>
F; 256-2775/Domain: transmembrane #status predicted < TM5>
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F; 2775/Domain: transmembrane #status predicted < TM5>
F; 2775/Domain: transmembrane #status predicted < TM5>
F; 2775/Domain: transmembrane #status predicted < TM5>
F; 27775/Domain: transmembrane #status predicted < TM
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G12401
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N.Contains: capsid protein C; envelope protein B; membrane-associated protein M; nonstru
C; Species: dengue virus type 1
C; Species: dengue virus type 1
C; Species: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 31-Dec-2004
C; Accession: C32401
S; Chu, M.C.; O'Rourke, B.J.; Trent, D.W.
J. Gen. Virol. 70, 1701-1712, 1989
A; Title: Genetic relatedness among structural protein genes of dengue 1 virus strains.
A; Reference number: A32401; MUD: 89293078; PMID: 2738579
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F;183,347,433/Binding site: carbohydrate (Asn) (covalent) #status predicted
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Matches 7; Conservative
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237 VETWALRHP 245
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237 VETWALRHP 245
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VETWALRHP 14
1 IETWFLRHP 9
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Best Local Similarity 77.8
Matches 7; Conservative
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Best Local Similarity 77.8
Matches 7; Conservative
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A; Molecule type: genomic RNA
A; Residues: 1-3390 <OSA>
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237 VETWALRHP 245
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GNWVD2
genome polyprotein - dengue virus type 2 (strain D2-04) (fragment)
N.Contains: capsid protein C; envelope protein E; membrane-associated protein M; nonstru
C; Species: dengue virus type 2
C; Species: dengue virus type 2
C; Species: 31-Dec-1992 #text_change 31-Dec-2004
C; Species: 31-Dec-1992 #text_change 31-Dec-2004
C; Species: 31-Dec-1992 #text_change 31-Dec-2004
C; Species: 31-Dec-1992 #text_change 31-Dec-2004
C; Species: 31-Dec-1992 #text_change 31-Dec-2004
C; Accession: JC1007
A; Aritle: The nucleotide and encoded amino acid sequences of the structural protein gene
A; Reference number: JC1007
A; Molecule type: genomic RNA
A; Residues: 1-775 xYAN>
A; Accession: JC1007
A; Molecule type: genomic RNA
A; Residues: 1-775 xYAN>
A; Cross references: UNIRROT: P30026; UNIPARC: UP10000174A06
A; Residues: 1-775 xYAN>
A; Cross reference: UNIRROT: P30026; UNIPARC: UP10000174A06
A; Residues: 1-775 xYAN>
A; Cross reference: UNIRROT: P30026; UNIPARC: UP10000174A06
A; Residues: 1-775 xYAN>
A; Residues: 1-775 xYAN>
A; Residues: 1-775 xYAN>
A; Routner, I.M.; Koh, C.L.; Lam, S.K.
Chinses of Microbiol: Immunol. 11, 9-12, 1991
A; Hitle: Nucleotide and encoded amino acid sequences of the nonstructural protein NS1 generals and encoded amino acid sequences of the nonstructural protein NS1 generals beneficially by the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content
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N;Contains: capsid protein C; envelope protein E; membrane-associated protein M; nonstru C;Species: dengue virus type 1
C;Species: dengue virus type 1
C;Accession: A27032
R;Mason, P.W.; McAda, P.C.; Mason, T.L.; Fournier, M.J.
N;Cology 161, 262-267, 1987
A;Title: Sequence of the dengue-1 virus genome in the region encoding the three structur A;Reference number: A27032
A;Acference number: A27032; MUD:88044504; PMID:3672932
A;Accession: A27032
A;Molecule type: genomic RNA
A;Residues: 1-1226 cMAS.
A;Coss-references: UNIPROT:P17763; UNIPARC:UPI0000131DF1; GB:M23027; NID:g511850; PIDN:C;Superfamily: hepatitis C virus genome polyprotein
C;Superfamily: hepatitis C virus genome polyprotein; nonstructural protein; nucle
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A.Residues: 776-1127 < YA2>
A.Residues: 776-1127 < YA2>
A.Residues: 776-1127 < YA2>
A.Residues: 776-1127 < YA2>
A.Residues: 776-1127 < YA2>
A.Residues: 776-1127 < YA2>
A.Roinser-references: UNIPARC: UDIO000174A07
A.Roinser-references: UNIPARC: UDIO000174A07
A.Note: the authors translated the codons GTG for residue 899 as Leu, CTG for residue 95
C.Superfamily: hepatitis C virus genome polyprotein
C.Keywords: capsid protein; envelope protein; glycoprotein; membrane-associated protein;
F;11-114/Product: capsid protein C #status predicted < CAP>
F;115-280/Product: membrane-associated protein M precursor #status predicted < MAM>
F;115-280/Product: envelope protein E #status predicted < CAN>
F;206-280/Product: envelope protein E #status predicted < CAN>
F;206-280/Product: envelope protein E #status predicted < CAN>
F;777-743/Domain: transmembrane #status predicted < TM3>
F;777-773/Pomain: transmembrane #status predicted < TM3>
F;777-773/Pomain: transmembrane #status predicted < TM3>
F;776-1127/Product: nonstructural protein NI #status predicted < NPN>
F;786-1127/Product: nonstructural protein NI #status predicted < NPN>
F;183,347,433,905,982/Binding site: carbohydrate (Asn) (covalent) #status predicted
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Pred. No. 4;
1; Mismatches
    77.8%;
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7; Conservative
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237 METWILRHP 245
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dengue serotype2.rpr

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membrane protein - dengue virus type 2 (strain M2) (fragment)
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Best Local Similarity 77.5-
'... 7; Conservative
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Matches 6; Conservative
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125 LETWFTRH 132
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1 IETWFLRHP
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                                                                                                                                                                               C. Accession: A4251.

R. Pu, J.; Tan, B.H.; Yap, E.H.; Chan, Y.C.; Tan, Y.H.

Vincession: A4251.

R. Pul. J. Tan, B.H.; Yap, E.H.; Chan, Y.C.; Tan, Y.H.

Vintle: Full.length cDNA sequence of dengue type 1 virus (Singapore strain S275/90).

A. A. A. Coccession: A4251; MUID:92263809; PMID:158563

A. A. A. Coccession: A42551; MUID:92263809; PMID:158563

A. A. Coccession: A42551; MUID:92263809; PMID:158563

A. Molecule type: genomic RNA

A. Residues: 1.336 etcu.

A. A. Coccession: A42551; MUID:92263809; PMID:1585663

A. Molecule type: genomic RNA

A. Residues: 1.336 etcu.

A. Residues: 1.336 etcu.

C. Supportantly: The partitis C virus genome polyprotein

C. Suportantly: Departitis C virus genome polyprotein

C. Suportantly: Departitis C virus genome polyprotein

C. Suportantly: Departitis C virus genome polyprotein

C. Suportantly: Departitis C virus genome polyprotein

C. Suportantly: Departitis C virus genome polyprotein

C. Suportantly: Departitis C virus genome polyprotein

C. Suportantly: Departitis C virus genome protein #status predicted < NED-

F. 1114/Product: capsid protein #status predicted < NED-

F. 115-204/Domain: nonterminal signal sequence flattus predicted < NED-

F. A. T69/Product: envelope protein Mistatus predicted < NED-

F. 775-1127/Product: nonstructural protein NS2 #status predicted < NES-

F. 1138-1144/Product: nonstructural protein NS2 #status predicted < NES-

F. 1175-1162/Region: nucleotide-binding motif B

F. 175-1162/Region: nucleotide-binding motif B

F. 175-1162/Region: DEAH motif

F. 175-1162/Region: DEAH motif

F. 175-1162/Region: nucleotide-binding motif B

F. 175-1162/Region: nucleotide-binding motif B

F. 175-1162/Region: nucleotide-binding motif B

F. 175-1162/Region: nucleotide-binding motif B

F. 175-1162/Region: nucleotide-binding motif B

F. 175-1162/Region: nucleotide-binding motif B

F. 175-1162/Region: Nucleotide Sequence Mistatus predicted < NAS-

F. 175-1162/Region: DEAH motif C Mistatus predicted < NAS-

F. 175-1162/Region: Nucleotide-binding motif B

F. 175-1162/Reg
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PROMOTE POLYProtein - dengue virus type 2 (strain PUO-218) (fragment)

N. Conteains: envelope protein E; membrane-associated protein M; nonstructural protein NSI
C;Species: dengue virus type 2
C;Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 31-Dec-2004
C;Accession: PS0043

R;Gruenberg, A.; Woo, W.S.; Biedrzycka, A.; Wright, P.J.
J. Gen. Virol. 69, 1391-1398, 1988
A;Title: Partial nucleotide sequence and deduced amino acid sequence of the structural p, R;Gruenberg, A.; Woo, W.S.; Biedrzycka, A.; Woo, W.S.; Biedrzycka, A.; Woo, W.S.; Biedrzycka, A.; Wolberger, BS0043
A;Reference number: PS0043; MUD:88258474; PMID:3385407
A;Rocession: PS0043; MUD:88258474; PMID:3385407
A;Rocession: PS0043
A;Molecule type: mRNA
A;Residues: 1-665 GRNA
A;Residues: UNIPROT:P18356; UNIPARC:UPI000178550
C;Comment: The RNA sequence was.obtained from the DDBJ, release 5.0.
C;Comment: The RNA sequence #status predicted <SIG>C;Comment: signal sequence #status predicted <SIG>F;1-91/Domain: signal sequence #status predicted <BES>F;66/Product: membrane-associated protein; M #status predicted <NSI>F;16-66/Product: envelope protein E #status predicted <BES>F;66-66s/Product: envelope protein NSI (fragment) #status predicted
F;69.233,319/Binding site; carbohydrate (Asn) (covalent) #status predicted
                   genome polyprotein - dengue virus type 1 (strain Singapore S275/90)
N/Contains: cappid protein; envelope protein; membrane protein; nonstructural protein NS4; nonstructural protein NS5
C/Species: dengue virus type 1
C/Species: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 31-Dec-2004
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Pred. No. 18;
1; Mismatches 1; Indels
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Pred. No. 11;
0; Mismatches 2; Indels
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Best Local Similarity 77.8%;
Matches 7; Conservative
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237 VETWALRHP 245
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Best Local Similarity
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A;Residues: 1.166 <SAM>
A;Cross_references: UNIPROT:Q67422; UNIPARC:UPI00000F4214; EMBL:X51712; NID:g59307; PIDN
C;Superfamily: hepatitis C virus genome polyprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     hypothetical protein yijF [imported] - Escherichia coli (strain 0157:H7, substrain EDL93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C;Species: Escherichia coli
C;Date: 16-Feb-2001 #sequence_revision 16-Feb-2001 #text_change 09-Jul-2004
C;Accession: 186085
R;Perna, N.T.; Plunkett III, G.; Burland, V.; Mau, B.; Glasner, J.D.; Rose, D.J.; Mayhew
iller, L.; Grotbeck, E.J.; Davis, N.W.; Lim, A.; Dimalanta, E.; Potamousis, K.; Apodaca,
Mature 409, 529-533, 2001
A;Title: Genome sequence of enterohemorrhagic Escherichia coli 0157:H7.
A;Reference number: A85480; MUID:21074935; PMID:11206551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Cross-references: UNIPROT:Q8X763; UNIPARC:UPI00001659BC; GB:AE005174; NID:g12518859; P
A;Experimental source: strain 0157:H7, substrain EDL933
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C;Species: Escherichia coli
C;Date: 18-Jul-2001 #sequence_revision 18-Jul-2001 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CjAccession: A99238
CjAccession: A99238
Silvani, T.; Makino, K.; Ohnishi, M.; Kurokawa, K.; Ishii, K.; Yokoyama, K.; Han, C.G. Basawara, N.; Yasunaga, T.; Kuhara, S.; Shiba, T.; Hattori, M.; Shinagawa, H. DNA Res. 8, 11-22, 2001
A;Title: Complete genome sequence of enterohemorrhagic Escherichia coli O157:H7 and geno
C;Species: dengue virus type 2
C;Date: 12-Feb-1993 #sequence_revision 12-Feb-1993 #text_change 31-Dec-2004
C;Date: 12-Feb-1993 #sequence_revision 12-Feb-1993 #text_change 31-Dec-2004
C;Accession: 809224
R;Samuel, S.; Koh, C.L.; Pang, T.; Lam, S.K.
Nucleic Acids Res. 18, 1905, 1990
A;Title: Nucleotide and encoded amino acid sequences of the membrane protein precursor
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                                                                                                                                                                                                                                agic fever, dengue shock syndrome or dengue fever.
A;Reference number: S09223; MUID:90245599; PMID:2336374
A;Accession: S09224
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Pred. No. 3.9;
0; Mismatches
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Pred. No. 7.2;
1; Mismatches
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A;Molecule type: DNA
A;Residues: 1-205 <BLAT>
A;Cross-references: UNIPARC:UPI000013B429; GB:AE000468; GB:U00096; NID:g1790374; PIDN:AA(
A;Experimental source: strain K-12, substrain MG1655
C;Genetics: C;Genetics: Strain K-12, Substrain G1655
C;Genetics: A;Genetics: Strain Coli hypothetical 23.0K protein b3944
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 probable sugar ABC transporter permease protein SMb20318 [imported] - Sinorhizobium melli. C;Species: Sinorhizobium mellioti corrections and sequence_revision 24-Aug-2001 #text_change 09-Jul-2004 C;Accession: H95879 R;Finan, T.M.; Weidner, S.; Wong, K.; Buhrmester, J.; Chain, P.; Vorholter, F.J.; Hernand Proc. Natl. Acad. Sci. U.S.A. 98, 9889-9894, 2001 A;Title: The complete sequence of the 1,683-kb pSymB megaplasmid from the N2-fixing endom A;Reference number: A95842; MUID:21396508; PMID:11481431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-343 «KUR>
A;Residues: 1-343 «KUR>
A;Residues: 1-343 «KUR>
A;Crosa-references: UNIPROT:Q92WM8; UNIPARC:UPI00000CB4A7; GB:AL591985; FIDN:CAC48704.1;
A;Experimental source: strain 1021, megaplasmid pSymB
A;Experimental source: strain 1021, megaplasmid pSymB
R;Galibert, F.; Finan, T.M.; Long, S.R.; Puhler, A.; Federspiel, N.A.; Fisher, R.F.;
Dela, D.; Chain, P.; Cowie, A.; Davis, R.W.; Dreano, S.; Federspiel, N.A.; Fisher, R.F.;
L.; Hyman, R.W.; Jones, T.
Science 293, 668-672, 2001
A;Authors: Kahn, D.; Kahn, M.L.; Kalman, S.; Keating, D.H.; Kiss, E.; Komp, C.; Lelaure, hebault, P.; Vandenbol, M.; Vorholter, F.J.; Weidner, S.; Wells, D.H.; Wong, K.; Yeh, K.(A)
A;Reference number: A96039; MuID:21368234; PMID:11474104
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A;Residues: 1-341 - KRIC.
A;Cross-references: UNIRROT: p03314; UNIPARC: UPI0000131E82; GB:X03700; GB:K02749; NID:g59
C;Superfamily: hepatitis C virus genome polyprotein
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R,Rice, C.M.; Lenches, E.M.; Eddy, S.R.; Shin, S.J.; Sheets, R.L.; Strauss, J.H.
Science 222, 726-733, 1985
A;Title: Nucleotide sequence of yellow fever virus: implications for flavivirus gene A;Reference number: A03914; MUID:85272570; PMID:4023707
A;Accession: A03914
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                                                                                                                                                                                                                                                                                                                                                                              Gaps
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C,Superfamily: 1-arabinose transport system permease araH
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Pred. No. 27;
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                          1, Mismatches
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Pred. No.
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75.0%;
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Best Local Similarity 85...
5, Conservative
                                                                                                                                                                                                                                                                                                       Query Match 72.7
Best Local Similarity 75.0
Matches 6; Conservative
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125 LETWFSRH 132
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WFIRHP 29
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H95879
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NyAlternate names: hypothetical protein F205
CiSpecias: Escherichia coli
CiSpecias: Escherichia coli
CiDate: 07-Jun-1996 #sequence_revision 07-Jun-1996 #text_change 09-Jul-2004
CiAccession: 178665; C65201
CiDate: 07-Jun-1996 #sequence_revision 07-Jun-1996 #text_change 09-Jul-2004
CiAccession: 178665; C65201
NyIlle: Analysis of the Bscherichia coli genome. IV. DNA sequence of the region from 89
A;Title: Analysis of the Bscherichia coli genome. IV. DNA sequence of the region from 89
A;Accession: 178665
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Accession: 178665
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Residues: 1-205 - RES>
A;Coss-references: UNIPROT: P32668; UNIPARC: UP1000013B429; EMBL: U000066; NID: 9409785; PIIC
R;Blattner, F.R; Plunkett III, G.; Bloch, C.A.; Perna, N.T.; Burland, V.; Riley, M.; Cq. A.; Rose.
A;Title: The complete genome sequence of Escherichia coli K-12.
A;Reterence number: A64720; MUID: 97426617; PMID: 9278503
A;Accession: C62201
A;Status: preliminary; nucleic acid sequence not shown; translation not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  probable protein methyltransferase PA3706 [imported] - Pseudomonas aeruginosa (strain PA C; Species: Pseudomonas aeruginosa C; Species: Pseudomonas aeruginosa C; Species: Pseudomonas aeruginosa C; Species: 15-Sep-2000 #sequence_revision 15-Sep-2000 #text_change 09-Jul-2004 C; Accession: A83184 X: O: Brady, X: D: Mizoguchi, S:D:; Warrener, P:; Hickey, M.J.; Brady, S.; Yuan, Y:; Brady, L.L.; Coulter, S.N.; Folger, K.R.; Kas, A.; Larbig, K.; Lim, J.; Lature 406, 959-964, 2000 A; Title: Complete genome sequence of Pseudomonas aeruginosa PA01, an opportunistic pathoral Release conumber: A82950; MUID:20437337; PMID:10984043 A; Residues: Preliminary A; Molecule: T422 A; ASCESSION: A83184 A; Steatus: preliminary A; Molecule: T422 A; ASCESSION: A83184 A; Steatus: Preliminary A; Molecule: T422 A; ASCESSION: A83184 A; Cross-references: UNIPROT:QHXTE; UNIPARC:UPI00000C5ACD; GB:AE004789; GB:AE004091; NID A; Experimental source: strain PA01 C; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: Genetics: A; Genetics: Genetics: Genetics: Genetics: Genetics: Genetics: Genetics: Genetics: Genetics: Genetics: Genetics: Genetics: Genetics: Genetics: Genetics: Genetics: Genetics: Genetics: Genetics: Genetics: Genetics: Genetics: Genetics: Genetics: Genetics: Genetics: Genetics: Genetics: Genetics: Genetics: Genetics: Genetics: Genetics: Genetics: Genetics: Genetics: Genetics: Genetics: Genetics: Genetics: Genetics: Genetics: Genetics: Genetics: Genetics: Genetics: Genetics
                                              A,Accession: A98238
A,Status: preliminary
A,Molecule type: DNA
A,Molecule type: DNA
A,Residues: 1-205 <HAY>
A,Cross-references: UNIPROT:Q8X763; UNIPARC:UPI00000D0AB8; GB:BA000007; PIDN:BAB38296.1;
A,Experimental source: strain O157:H7, substrain RIMD 0509952
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A;Gene: ECB4873
C;Superfamily: Escherichia coli hypothetical 23.0K protein b3944
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           A; Reference number: A99629; MUID:21156231; PMID:11258796
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Matches 6; Conserv
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C, Species; yellow fever virus
C, Species; yellow fever virus
C, Date: 31-Mar-1991 #sequence_revision 31-Mar-1991 #text_change 31-Dec-2004
C, Accession: 807537
R, Dupuy, A.; Despres, P.; Cahour, A.; Girard, M.; Bouloy, M.
R, Dupuy, A.; Despres, P.; Cahour, A.; Girard, M.; Bouloy, M.
Nucleic Acids Res, 17, 3899, 1899
A, Title: Nucleotide sequence comparison of the genome of two 17D-204 yellow fever vaccir
A, Reseasion: 807757
A, Reseasion: 807757
A, Reseasion: 807757
A, Reseasion: 807757
A, Residues: 1-3411 < DUPA
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A, 
C;Keywords: ATP; capsid protein; envelope protein; glycoprotein; nonstructural protein; F;2-10/Product: capsid protein C #status predicted <CPC>
F;2-10/Product: envelope protein M #status predicted <CPC>
F;21-285/Product: envelope protein M #status predicted <CPM>
F;21-285/Domain: transmembrane #status predicted <TM2>
F;271-285/Domain: transmembrane #status predicted <TM2>
F;286/Domain: transmembrane #status predicted <TM3>
F;780-778/Pomain: transmembrane #status predicted <TM3>
F;776-778/Domain: transmembrane #status predicted <TM3>
F;776-718/Product: nonstructural protein NS1 #status predicted <NS1>
F;1189-1180/Domain: transmembrane #status predicted <TM5>
F;1189-1180/Product: nonstructural protein NS2 #status predicted <NS2>
F;188-1207/Product: nonstructural protein NS3 #status predicted <NS3>
F;188-1682-1689/Region: nucleotide-binding motif A (P-loop)
F;108-1784/Region: nucleotide-binding motif B (F-loop)
F;108-2394/Product: nonstructural protein NS4# #status predicted <NA>
F;208-2506/Product: nonstructural protein NS4# #status predicted <NA>
F;208-2506/Product: nonstructural protein NS4# #status predicted <NA>
F;208-2506/Product: nonstructural protein NS4# #status predicted <NA>
F;208-2506/Product: nonstructural protein NS4# #status predicted <NA>
F;208-2506/Product: nonstructural protein NS4# #status predicted <NA>
F;208-2506/Product: nonstructural protein NS4# #status predicted <NAB>
F;208-2506/Product: nonstructural protein NS4# #status predicted <NAB>
F;208-2506/Product: nonstructural protein NS4# #status predicted <NAB>
F;208-2506/Product: nonstructural protein NS4# #status predicted <NAB>
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N.Contains: capsid protein C; envelope protein M; maior envelope
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66.7%; Pred. No. 2.9e+02;
tive 2; Mismatches 1; Indels
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242 IERWFVRNP 250
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Best Local Similarity

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C;Accession: T49934
R;Bevan, M.; Hilbert, H.; Braun, M.; Holzer, E.; Brandt, A.; Duesterhoeft, A.; Bancroft, A;Bevan, M.; Hilbert, H.; Braun, M.; Holzer, E.; Brandt, A.; Duesterhoeft, A.; Bancroft, A;Reference number: 224490
A;Reference number: 224490
A;Accession: T49934
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Molecule type: DNA
A;Residues: 1-560 cDAV>
A;Cross-references: UNIPROT:P09256; UNIPARC:UPI00001386A3; EMBL:X04370; NID:g59989; PIDN
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Cross-references: UNIPROT:Q9LXC8; UNIPARC:UP100009CB29; EMBL:AL353994; GSPDB:GN00063,
A;Experimental source: cultivar Columbia; BAC clone F17114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Introns: 44/2; 93/1; 118/3; 159/3; 194/1; 206/3; 240/3; 269/3; 293/3; 317/2; 356/2
C;Superfamily: Serine carboxypeptidase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .Keywords: glycoprotein
;206,325,344,432,461/Binding site: carbohydrate (Asn) (covalent) #status predicted
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N;Alternate names: protein F17114.170
C;Species: Arabidopsis thaliana (mouse-ear cress)
C;Date: 02-Jun-2000 #sequence_revision 02-Jun-2000 #text_change 05-Oct-2004
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C;Species: human herpesvirus 3, varicella-zoster virus
C;Date: 30-Sep-1988 #sequence_revision 30-Sep-1988 #text_change 09-Jul-2004
C;Accession: E27342
R;Davison, A.J.; Scott. J R
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J. Gen. Virol. 67, 1759-1816, 1986
A,Filtle: The complete DNA sequence of varicella-zoster virus.
A,Reference number: A27345; MUID:86306657; PMID:3018124
A,Accession: E27342
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066346.
01-NOV-1996, integrated into UniProtKB/TrEMBL.
01-NOV-1996, sequence version 1.
07-FEB-2006, entry version 2.
Premembrane polyprotein (Fragment).
Premembrane polyprotein (Fragment).
Premembrane types types (Fragment).
Premembrane polyprotein (Fragment).
Premembrane polyprotein (Fragment).
Premembrane types (Fragment).
Noruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
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01.NOV-1996, sequence version 1.

07-FEB-2006, entry version 2.

Genomic RNA for envelope protein E N-term. (Fragment).

Dengue virus type 2.

Plavivirus; BRNA positive-strand viruses, no DNA stage; Flaviviridae;

Flavivirus; Dengue virus group.

NCBI_TAXID=11060;
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STRAIN=New Guinea C.
MEDIJNE=81197230; PubWed=2952760;
Biedrzycka A., Cauchi M.R., Bartholomeusz A., Gorman J.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    89.1%; Score 49; DB 2; Length 120; 88.9%; Pred. No. 1.4; 1.4; ive 0; Mismatches 1; Indels
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GO; GO:0016021; C:integral to membrane; IEA.

GO; GO:0019028; C:viral acquid, IEA.

GO; GO:0019031; C:viral envelope; IEA.

GO; GO:0019031; C:viral infectious cycle; IEA.

InterPro; IPR011999; Plav glyE_cen_dm.

InterPro; IPR011999; Plav glyE_cen_dm.

InterPro; IPR011998; Vrl_glyE_cen_dm.

Pfam; PF01004; Flavi_glycoprot; 1.
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protein E.
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nes 8; Conservative
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Distributed under the Creative Commons Attribution-NoDerivs License
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MEDILINE=21571640; PubMed=11714970;
Uzcategui N.Y., Camacho D., Comach G., Cuello de Uzcategui R.,
Holmes E.C., Gould E.A.;
Molecular epidemiology of dengue type 2 virus in Venezuela: evidence
"Molecular epidemiology of dengue type 2 virus in Venezuela: evidence
"of in situ virus evolution and recombination.";
J. Gen. Virol. 82:2945-2953(2001).
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Flavivirus; Dengue virus group.
NCBI_TaxID=11060;
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88.9%; Pred. No. 1.9;
tive 0; Mismatches 1; Indels
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                                                                                                                                                                                                                                                                                                                 166 AA; 18751 MW; F498748D35909639 CRC64;
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SMR, Q8QZ64; 21-100.
G0; G0:0019028; C:*Viral capsid; IEA.
G0; G0:005198; F:structural molecule activity; IEA.
G0; G0:0019058; P:*viral infectious cycle; IEA.
                      PIR; S40144; S40144.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
InterPro; IPR000069; Flavi_M.
Pfam; PF01004; Plavi_M.
Pfam; PF01004; Plavi_M.
Pfam; PF01570; Flavi_M; 1.
                                                                                                                                                                                                                                       membrane protein.
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QBQZ64;
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InterPro; IPR000069; Flavi_M.
InterPro; IPR002635; Flavi_bropep.
Pfam, PF01003; Flavi_capsid; 1.
Pfam; PF01004; Flavi_M; 1.
Pfam; PF01570; Flavi_propep; 1.
EMBL; X72849; CAA51363.1; -; mRNA.
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Best Local Similarity 88.9
Matches 8; Conservative
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MEDLINE=21571640; PubMed=11714970;
Uzcategui N Y., Camach D., Comach G., Cuello de Uzcategui R.,
Holmes E.C., Gould E.A.;
"Molecular epidemiology of dengue type 2 virus in Venezuela: evidence
for in situ virus evolution and recombination.";
J. Gen. Virol. 82:2945-2953(2001).
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MEDLINE=21571640; PubMed=11714970;
Uzcatequi N.Y., Camacho D., Comach G., Cuello de Uzcatequi R.,
Holmes E.C., Gould E.A.;
"Molecular epidemiology of dengue type 2 virus in Venezuela: evidence
for in situ virus evolution and recombination.";
J. Gen. Virol. 82:2945-2953(2001).
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Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
NCBL_TaxID=11060;
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Flavivirus; Dengue virus group.
NCBI_TaxID=11060;
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GO; GO:00019028; C:viral capsid; IEA.
GO; GO:0005198; F:structural molecule activity; IEA.
GO; GO:000508; F:structural infectious cycle; IEA.
InterPro; IPR0001122; Flavi capsidC.
InterPro; IPR000535; Flavi M.
InterPro; IPR000535; Flavi Dropep.
Ream; PF01004; Flavi apsid; 1.
Ream; PF01004; Flavi M; 11.
Refam; PF01004; Flavi M; 11.
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QBQZ66;
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NON TER
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Distributed under the Creative Commons Attribution-NoDerivs License
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MEDLINE=21571640; PubMed=11714970;
Uzcategui N.Y., Camacho D., Comach G., Cuello de Uzcategui R.,
Holmes E.C., Gould E.N.,
"Molecular epidemiology of dengue type 2 virus in Venezuela: evidence
for in situ virus evolution and recombination.";
J. Gen. Virol. 82:2945-2953(2001).
                                                                                                                                                                                                                                                                                                                                                                   Gaps
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Viruses; ssRNA positive-strand viruses, no DNA stage, Flaviviridae,
Flavivirus; Dengue virus group.
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SMR; QO2GG7, 21-100.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019028; P:structural molecule activity; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
InterPro; IPR001122; Flavi_apsidC.
InterPro; IPR001069; Flavi_m.
Pfam; PF01009; Flavi_apsid; 1.
Pfam; PF01004; Flavi_m, 1.
Pfam; PF01570; Flavi_propep; 1.
                                                                                                                                                                                                                                                                  280 AA; 31893 MW; 814A8B9B4A22AC20 CRC64;
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GO, GO:0019028; C:viral capsid; IEA.
GO; GO:0005198; F:structural molecule activity; IEA.
GO; GO:0005198; F:structural molecule activity; IEA.
GO; GO:0019058; F:structural infectious cycle; IEA.
InterPro; IRR001122; Flavi apsidC.
InterPro; IRR002535; Flavi m.
InterPro; IRR002535; Flavi m.
Pfam; PF01003; Flavi apsid; 1.
Pfam; PF01070; Flavi propep; 1.
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88.9%; Pred. No. 3.2;
tive 0; Mismatches
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Best Local Similarity 88.90,
-hog 8; Conservative
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Matches 8; Conservative
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555 AA.

PRT;

STANDARD;

POLG DENZH

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                                                                                                                 27-SEP-2005, integrated into UniProtKB/TrEMBL.
27-SEP-2005, sequence version 1.
07-FEB-2006, entry version 3.
Polyprotein (Fragment).
Dengue virus type 2.
Polyprotein (Fragment).
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Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pyke A.T., Hanna J., Richards A., Taylor C.T., Morgan A., Humphreys J., Brookes D., Smith G.A.; "Defining Dengue in the New Millennium."; Arbovirus Res. Aust. 0:0-0(2005).
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Serafin I.L., Phillips D.A.;
Submitted (MAY-1997) to the EMBL/GenBank/DDBJ databases.
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GO; GO:0016021; C:integral to membrane; IEA.

GO; GO:0019028; C:viral capsid; IEA.

GO; GO:0019011; C:viral capsid; IEA.

GO; GO:0019013; C:viral envelope; IEA.

GO; GO:0019018; F:structural molecule activity; IEA.

R GO; GO:0019018; F:structural molecule activity; IEA.

R InterPro; IPR001199; F:laviglyE_cen_dm.

R InterPro; IPR001157; F:laviglyE_laviglyE_laviglyE_laviglyE_laviglyE_laviglyE_laviglyE_laviglyE_laviglyE_laviglyE_laviglyE_laviglyE_laviglyE_laviglyE_laviglyE_laviglyE_laviglyE_laviglyE_laviglyE_laviglyE_laviglyE_laviglyE_laviglyE_laviglyE_laviglyE_laviglyE_laviglyE_laviglyE_laviglyE_laviglyE_laviglyE_laviglyE_laviglyCop_C_1.

R Ffam; PF00869; FlaviglyE_laviglyCop_C_1.

R Ffam; PF0014; Flavigly: 1.
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88.9%; Pred. No. 6.4;
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NCBI_TaxID=11060;
                                                                           PRELIMINARY;
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NON_TER 50
SEQUENCE 56
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Q3ZPJO;
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       RESULT 8
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                                                                                                                                                                                                                                                                                                                                                            MUCLEOTIDE SEQUENCE (GENOMIC RNA).

MEDLINE=92113574, PubMed=1339466;

Shiu S.Y.W., Jiang W.R., Porterfield J.S., Gould E.A.;

Shiu S.Y.W., Jiang W.R., Porterfield J.S., Gould E.A.;

Shiu S.Y.W., Jiang W.R., Porterfield J.S., Gould E.A.;

Shiu S.Y.W.

Shiu S.Y.W.

Shiu S.Y.W.

Threeloope protein sequences of dengue virus isolates TH-36 and TH-

and identification of a type-specific genetic marker for dengue
and itck-borne Ilaviviruses.";

J. Gen., Virol. 73:207-212(1992).

C. IP THM: Specific enzymatic cleavages in vivo yield mature proteins

(By similarity).

C. IP MISCELLANBOUS: The virion of this virus is a nucleocapsid covered
by a lipoprotein envelope. The envelope contains two proteins: the
protein M and glycoprotein E. The nucleocapsid is a complex of
protein M and glycoprotein E. The nucleocapsid is a complex of
protein M and glycoprotein E. The nucleocapsid is a complex of
consists of three heterodimers of envelope protein M precursor

(PrM) and envelope protein E (By similarity).
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                                                                           07-MAR-2006, entry version 43.
Genome polyprotein [Contains: Envelope protein M (Matrix protein);
Major envelope protein E; Nonstructural protein 1 (NS1)] (Fragment).
Dengue virus type 2 (strain TH-36).
Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus, 10-ngue virus group.
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RESP, 00464; J01404.

RESP, 008653; J016E.

RINE PROSPOSS 50-443.

InterPro; IPR011999; Flav glyE_cen_dm.

InterPro; IPR01099; Flav glyE_cen_dm.

InterPro; IPR01099; Flav glyE_cen_dim.

Refam; PF02832; Flavi glyCop_C; 1.

Refam; PF02805; Flavi glyCop_C; 1.

Refam; PF01004; Flavi glyCop_C; 1.

Refam; PF01004; Rlavi m, 1.

Refam; RO1004; Rlavi m, 1.

Refam; RO1004; Rlavi m, 1.

Refam; RO1004; Rlavi m, 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1; Indels
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CHAIN <1 49 Envelope protein M.
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Major envelope protein E.
/FTId=PRO_0000037923.
Nonstructural protein 1.
/FTId=PRO_0000037924.
Potential.
Potential.
N-linked (GlCNAC. . .) (Pot
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01-APR-1993, integrated into UniProtKB/Swiss-Prot. 01-APR-1993, sequence version 1.
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0; Mismatches
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hes 8; Conserv
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Indels

CHAIN CHAIN IETWILRHP 14

Matches

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Length 565;

dengue serotype2.rup

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GO; GO:0019058; P:viral infectious cycle; IEA
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Best Local Similarity 88.9
Matches 8; Conservative
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Best Local Similarity 88.9
Matches 8; Conservative
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STRAIN=00U3/2000/human;
                                                                                                                                                                           123 İETWILRHP 131
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                Polyprotein.
NON TER
NON TER 6
SEQUENCE 66
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Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms Distributed under the Creative Commons Attribution-NoDerivs License
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Distributed under the Creative Commons Attribution-NoDerivs License
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Viruses; SSRNA positive-strand viruses, no DNA stage; Flaviviridae; Flavivirus; Dengue virus group.
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"MOLECULAR EPIDEMIOLOGY OF DENGUE 2 VIRUSES IN THE PHILIPPINES
                                                                                                                                                                                                                                                                                                                                                                                                                         89.1%; Score 49; DB 2; Length 578; 88.9%; Pred. No. 6.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         1; Indels
                                                                             Sent CLEAR 1941.

GG: GG: 0016021; C: integral to membrane; IEA.

GG: GG: 0019021; C: viral capsid; IEA.

GG: GG: 0019021; C: viral capsid; IEA.

GG: GG: 0019031; C: viral envelope; IEA.

GG: GG: 0019058; P: viral infectious cycle; IEA.

GG: GG: 0019058; P: viral infectious cycle; IEA.

InterPro; IPR010199; Flavi JVE.

InterPro; IPR00157; Flavi JVE.

InterPro; IPR00157; Flavi JVE.

InterPro; IPR00157; Flavi JVE.

InterPro; IPR011998; VII—31yE.

Ffam; PF00869; Flavi Glycoprot; 1.

Ffam; PF01064; Flavi Glycoprot; 1.

Pfam; PF01064; Flavi M: 1.

Pfam; PF01064; Flavi M: 1.
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Submitted (OCT-2004) to the EMBL/GenBank/DDBJ databases.
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578 578
578 AA, 63606 MW, 1C03A7CFD72C567D CRC64;
                                                                                                                                                                                                                                                                                                                        membrane protein.
envelope protein.
nonstructural protein 1.
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GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:001901; C:viral envelope; IEA.
GO; GO:001901; F:structural molecule activity; IEA.
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Am. J. Trop. Med. Hyg. 73:796-802(2005).
                                          EMBL; AF004019; AAB61366.1; -; mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QBCV3 9FLAV PRELIMINARY; PRT;
QBCV3;
                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity 88.9
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542
>578
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STRAIN=01St193/2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRAIN=01St193/2001;
                                                        HSSP; Q88653; 10KE.
SMR; O12290; 48-441.
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                                                                                                                                           Gaps
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STRAIN=00013/2006/human;
PubNed=16222028;
Salda L.T., Parquet M.D., Matias R.R., Natividad F.F., Kobayashi N.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Virises, ssRNA positive-strand viruses, no DNA stage, Flaviviridae, Flavivirus; Dengue virus group.
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Am. J. Trop. Med. Hyg. 73:796-802(2005).
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88.9%; Pred. No. 7.4;
iive 0; Mismatches 1; Indels
                                                                                    Length 661;
                                                                                                                                        1; Indels
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661 661
661 AA; 73049 MW; 2A644DEADA728CF2 CRC64;
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GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:005198; F:structural molecule activity; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                            22-NOV-2005, integrated into UniProtKB/TrEMBL. 22-NOV-2005, sequence version 1. PolyPreB-2006, entry version 3. Polyprotein (Fragment).
                                                                              89.1%; Score 49; DB 2;
88.9%; Pred. No. 7.4;
tive 0; Mismatches
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Q3BCV5 9FLAV
AC Q3BCV5_
C3BCV5_
DT 22-NOV-2005, integrated into UniProtKB/TrEMBL.
DT 72-NOV-2005, sequence version 1.
DT 72-NOV-5005, sequence version 1.
DT 72-NOV-5005, sequence version 3.
DF 72-PEB-2006, entry version 3.
DF POlyprotein (Fragment).
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Q3BCV4;
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Conservative
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                                                                              661 AA;
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STRAIN=00St22/2000;
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Best Local Similarity
Matches 8; Conserv
                                                                                                                                                          1 IETWFLRHP
                                                                                                                                                                                                                                                                                                                                                                                     PubMed=16222028;
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Q3BCX8 9FLAV
Q3BCX8;
GO; GO:0016021
GO; GO:0019028
GO; GO:0019031
GO; GO:0005196
GO; GO:0019058
POLYPTOCLEIN.
NON TER 66
SEQÜENCE 661
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NON TER
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SEQUENCE 66
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                                                                                                                                                                                                               RESULT 14
Q3BCX7_9FL
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Distributed under the Creative Commons Attribution-NoDerivs License
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Morita K.;
                                                                               PubMed=16222028;
Salda L.T., Parquet M.D., Matias R.R., Natividad F.F., Kobayashi N.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Dengue virus type 2.
Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
     Viruses; saRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
NCBI_TaxID=11060;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "MOLECULAR EPIDEMIOLOGY OF DENGUE 2 VIRUSES IN THE PHILIPPINES: GENOTYPE SHIFT AND LOCAL EVOLUTION."; Am. J. Trop. Med. Hyg. 73:796-802(2005).
                                                                                                                'MOLECULAR EPIDEMIOLOGY OF DENGUE 2 VIRUSES IN THE PHILIPPINES:
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                                                                                                                                                                      STRAIN=SLMC70/1995/human; Salda L.T.D.; Submitted (OCT-2004) to the EMBL/GenBank/DDBJ databases.
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                                                                                                                                                                                                                                                                                                                                                     73081 MW; 6F6C51D6BEC33CA8 CRC64;
                                                                                                                                                                                                                                              EMBL, AY786396; AAX18214.1; -; Genomic_RNA.
GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:005198; F:structural molecule activity; IEA.
GO; GO:00190598; P:viral infectious cycle; IEA.
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                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
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                                                                                                                          GENOTYPE SHIFT AND LOCAL EVOLUTION.";
Am. J. Trop. Med. Hyg. 73:796-802(2005).
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Q3BCX6;
                                                        NUCLEOTIDE SEQUENCE.
STRAIN=SLMC70/1995/human;
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    Dengue virus type 2.
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                                                                                                                                                            NUCLEOTIDE SEQUENCE
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tes 8; Conserv
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PubMed=16222028;
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Flavivirus; Dengue virus group.
NCBI_TaxID=11060;
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GENOTYPE SHIFT AND LOCAL EVOLUTION.";
Am. J. Trop. Med. Hyg. 73:796-802(2005).
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88.9%; Pred. No. 7.4;
iive 0; Mismatches 1; Indels
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89.1%; Score 49; DB 2; Length 661;
Best Local Similarity 88.9%; Pred. No. 7.4;
Matches 8; Conservative 0; Mismatches 1; Indels
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Submitted (OCT-2004) to the EMBL/GenBank/DDBJ databases.
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73083 MW; SF56106DA1550EF6 CRC64;
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73143 MW; 5509B5931AE2BF2B CRC64;
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GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:005198; F:structural molecule activity; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
GO:0016021; C:integral to membrane; IEA.
GO:0019028; C:viral capsid; IEA.
GO:0019031; C:viral envelope; IEA.
GO:0005198; F:structural molecule activity; IEA.
GO:0019058; P:viral infectious cycle; IEA.
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Distributed under the Creative Commons Attribution-NoDerivs License
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STRAIN=CI27/1998;
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PubMed=16222028;
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Distributed under the Creative Commons Attribution-NoDerivs License
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                                                                                          Dengue virus type 2.
Vituses; sRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
NCBI_TaxID=11060;
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Viruses; seRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
VCBI_TaxID=11060;
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Am. J. Trop. Med. Hyg. 73:796-802(2005).
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Submitted (OCT-2004) to the EMBL/GenBank/DDBJ databases.
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Salda L.T.D.;
Submitted (OCT-2004) to the EMBL/GenBank/DDBJ databases.
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73086 MW; 899A28D6B96FB5B0 CRC64;
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GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:005198; F:structural molecule activity; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
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Am. J. Trop. Med. Hyg. 73:796-802 (2005).
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                      22-NOV-2005, sequence version 1. 07-FEB-2006, entry version 3. Polyprotein (Fragment).
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STRAIN=99Sa695/1999;
PubMed=16222028;
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STRAIN=99Sa695/1999;
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Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
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"MOLECULAR EPIDEMIOLOGY OF DENGUE 2 VIRUSES IN THE PHILIPPINES:
GENOTYPE SHIFT AND LOCAL EVOLUTION.";
Am. J. Trop. Med. Hyg. 73:796-802(2005).
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661 AA; 73072 MW; 654A28D6B96FB5A8 CRC64;
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73166 MW; 84C50AFD2358F08C CRC64;
EMBL, AY786372; AAX18190.1; -; Genomic_RNA.
GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:0005198; F:structural molecule activity; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
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GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:001908; F:structural molecule activity; IEA.
GO; GO:0019088; P:viral infectious cycle; IEA.
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88.9%; Pred. No. 7.4;
iive 0; Mismatches 1
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88.9%; Pred. No. 7.4;
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Flavivirus; Dengue virus group
NCBI_TaxID=11060;
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Best Local Similarity 88.9
Matches 8; Conservative
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661 AA;
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STRAIN=DOH97/1995;
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STRAIN-BRL3/1996;
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PubMed=16222028;
Salda L.T., Parquet M.D., Matias R.R., Natividad F.F., Kobayashi N.,
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NCBI_TaxID=11060;
                                                                                                                                                      Dengue virus type 2.
Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
NCSI_TaxID=11060;
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Am. J. Trop. Med. Hyg. 73:796-802(2005).
                                                                                                                                                                                                                                                                                                                                             "MOLECULAR EPIDEMIOLOGY OF DENGUE 2 VIRUSES IN THE PHILIPPINES: GENOTYPE SHIFT AND LOCAL EVOLUTION."; Am. J. Trop. Med. Hyg. 73:796-802(2005).
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88.9%; Pred. No. 7.4;
tive 0; Mismatches 1; Indels
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GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:001901; C:viral envelope; IEA.
GO; GO:005198; F:structural molecule activity; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
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Polyprotein (Fragment).
                                                                        22-NOV-2005, integrated into UniProtKB/TrEMBL. 22-NOV-2005, sequence version 1. 07-PEB-2006, entry version 3. Polyprotein (Fragment).
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                                        661 AA.
                                    QBCY1 9FLAV PRELIMINARY; PRT; Q3BCY1;
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Matches 8; Conservative
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STRAIN=CSMC7/1996;
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                                                                                     Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms Distributed under the Creative Commons Attribution-NoDerivs License
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GENOTYPE SHIFT AND LOCAL EVOLUTION.";
Am. J. Trop. Med. Hyg. 73:796-802(2005).
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89.1%; Score 49; DB 2; Length 661;
Best Local Similarity 88.9%; Pred. No. 7.4;
Matches 8; Conservative 0; Mismatches 1; Indels
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Pred. No. 7.4;
0; Mismatches 1; Indels
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Salda L.T.D.;
Submitted (OCT-2004) to the EMBL/GenBank/DDBJ databases.
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73072 MW; 654A28D6B96FB5A8 CRC64;
                                                                                                                                                              EMBL; AY786369; AAX18187.1; -; Genomic_RNA.
GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:005198; F:structural molecule activity; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
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GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:001908; F:structural molecule activity; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
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Lorono-Pino M.A., Farfan-Ale J.A., Zapata-Peraza A.L.,
Rosado-Paredes P.P., Flores-Flores L.F., Garcia-Rejon J., Diaz F.J.,
Blitvich B.J., Jimenez-Rios E., Blair C.D., Olson K.E., Black W. IV,
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"Introduction of the American/Asian genotype of dengue 2 virus into the Yucatan State of Mexico.";
Am. J. Trop. Med. Hyg. 71:485-492(2004).
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Submitted (OCT-2004) to the EMBL/GenBank/DDBJ databases
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GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:0019039; F:structural molecule activity; IEA.
GO; GO:0019058; F:structural molecule activity; IEA.
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SEQÜENCE 661 AA; 73072 MW; 654A28D6B96FB5A8 CRC64;
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661 AA; 73072 MW; 654A28D6B96FB5A8 CRC64;
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GO; GO: 0016021; C: integral to membrane; IEA.
GO; GO: 0019028; C: viral capsid; IEA.
GO; GO: 0019028; C: viral capsid; IEA.
GO; GO: 0019058; P: structural molecule activity;
GO; GO: 0019058; P: viral infectious cycle; IEA.
InterPro; IPR011999; Plavi glyE cen. dm.
InterPro; IPR00036; Plavi glyE interPro; IPR00036; Plavi glyE interPro; IPR011998; VI_GlyE interPro; IPR011998; VI_GlyE interPro; IPR011998; VI_GlyE interPro; IPR011998; VI_GlyE interPro; IPR011998; VI_GlyE interPro; IPR011998; VI_GlyE interPro; IPR011998; VI_GlyE interPro; IPR011998; VI_GlyE interPro; IPR011998; VI_GlyE interPro; IPR011998; VI_GlyE interPro; IPR011998; VI_GlyE interPro; IPR011998; VI_GlyE interPro; IPR011998; VI_GlyE interPro; IPR011998; VI_GlyE interPro; IPR011998; VI_GlyCoprot; I.
Pfam; PF01004; Plavi interPro; I.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
                                   Am. J. Trop. Med. Hyg. 73:796-802(2005).
          GENOTYPE SHIFT AND LOCAL EVOLUTION.";
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QSQIB6_9FLAV PRELIMINARY; PRT;
QSQIB6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Flavivirus; Dengue virus group.
NCBI_TaxID=11060;
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Matches 8; Conservative
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                                                                                                                STRAIN=SLMC125/1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 IETWFLRHP 9
                                                                                       NUCLEOTIDE SEQUENCE
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QSQIB6_9FI
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Salda L.T., Parquet M.D., Matias R.R., Natividad F.F., Kobayashi N.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
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STRAIN=SLMC125/1995;
PubMed=16222028;
Salda L.T., Parquet M.D., Matias R.R., Natividad F.F., Kobayashi N.,
                                                                                                                                                                                                                                                                                                                   Dengue virus type 2.
Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
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22-NOV-2005, sequence version 1.
07-FEB-2006, entry version 3.
Polyproten (Fragment).
Dengue virus type 2.
Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "MOLECULAR EPIDEMIOLOGY OF DENGUE 2 VIRUSES IN THE PHILIPPINES: GENOTYPE SHIFT AND LOCAL EVOLUTION.";
Am. J. Trop. Med. Hyg. 73:796-802(2005).
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"MOLECULAR EPIDEMIOLOGY OF DENGUE 2 VIRUSES IN THE PHILIPPINES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     89.1%; Score 49; DB 2; Length 661;
88.9%; Pred. No. 7.4;
ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Salda L.T.D.;
Submitted (QCT-2004) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      73150 MW; 654F225FA969639F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL, AY786167; AAX18185.1; -; Genomic RNA.
GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:001908; F:structural molecule activity; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
                                                                                                                                                                                                        22-NOV-2005, integrated into UniProtKB/TrEMBL. 22-NOV-2005, sequence version 1. 07-FEB-2006, entry version 3. Polyprotein (Fragment).
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Q3BCY4;
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QBCYS;
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NCBI_TaxID=11060;
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NCBI_TaxID=11060;
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Best Local Similarity 88.9%;
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123 IETWILRHP 131
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PubMed=16222028;
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Distributed under the Creative Commons Attribution-NoDerivs License
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Rosado-Paredes B.P., Flores-Flores L.F., Garcia-Rejon J., Diaz F.J.,
Blitvich B.J., Jimenez-Rios E., Blair C.D., Olson K.E., Black W. IV,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Introduction of the American/Asian genotype of dengue 2 virus into the Yucatan State of Mexico."; Am. J. Trop. Med. Hyg. 71:485-492(2004).
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88.9%; Pred. No. 7.4;
tive 0; Mismatches 1; Indels
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88.9%; Pred. No. 7.4;
tive 0; Mismatches 1; Indels
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GO, GO:0016021; C:integral to membrane; IEA.

GO, GO:0019022; C:irial capsid; IEA.

GO; GO:0019011; C:irial capsid; IEA.

GO; GO:0019011; C:viral envelope; IEA.

GO; GO:0019018; F:structural molecule activity; IEA.

GO; GO:0019018; F:structural infectious cycle; IEA.

InterPro; IPR011999; Flavi propep.

InterPro; IPR01099; Flavi propep.

InterPro; IPR010936; Flavi propep.

InterPro; IPR01098; Vir glyE Ig-like.

InterPro; IPR01098; Vir glyE on dim.

Pfam; PF02812; Flavi glycop.C; 1.

Pfam; PF03869; Flavi glycop.C; 1.

Pfam; PF01869; Flavi jlycop.C; 1.

Pfam; PF01869; Flavi jlycop.C; 1.
                                                                                                  661 661
661 AA; 73207 MW; A919612986E04157 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q5V187 9FLAV PRELIMINARY; PRT; 661 AA. Q5V187.
07-DEC-2004, integrated into UniProtKB/TrEMBL.
07-DEC-2004, sequence version 1.
07-FEB-2006, entry version 8.
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Pfam; PF01570; Flavi_propep; 1.
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NCBI TaxID=11060;
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Best Local Similarity 88.2
8, Conservative
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Matches 8, Conservative
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PubMed=15516647;
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                                   Polyprotein.
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PubMed=15516647;
Lorono-Pino M.A., Farfan-Ale J.A., Zapata-Peraza A.L., Diaz F.J.,
Rosado-Paredes B.P., Flores-Flores L.F., Garcia-Rejon J., Diaz F.J.,
Blitvich B.J., Jimenez-Rios E., Blair C.D., Olson K.E., Black W. IV,
QSV188;
QSV188;
QSV188;
QSV188;
QT-DEC-2004, integrated into UniProtKB/TrEMBL.
Q7-DEC-2004, sequence version 1.
Q7-DEC-2006, entry version 8.
POlyprotein (Fragment).
Dengue virus type 2.
Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae; Flavivirus; Dengue virus group.
NCBL_TaxID=11060;
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88.9%; Pred. No. 7.4;
.ive 0; Mismatches 1; Indels
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GO; GO: 0016021; C: integral to membrane; IEA.
GO; GO: 0019028; C: viral acapsid; IEA.
GO; GO: 0019029; C: viral acapsid; IEA.
GO; GO: 0019028; F: structural molecule activity; IEA.
GO; GO: 0019058; P: viral infectious cycle; IEA.
InterPro; IPR011999; Plav gJyE cen_dm.
InterPro; IPR000535; Flavi propep.
InterPro; IPR001998; V: glyE Ig-like.
InterPro; IPR011998; V: glyE Ig-like.
InterPro; IPR011998; V: glyE Ig-like.
InterPro; IPR011998; V: glyE Ig-like.
InterPro; IPR011998; V: glyE Ig-like.
InterPro; IPR011998; V: glyE Ig-like.
InterPro; IPR011998; V: glyE Ig-like.
InterPro; IPR011998; V: glyE Ig-like.
InterPro; IPR011998; V: glyE Ig-like.
InterPro; IPR011998; V: glyE Ig-like.
InterPro; IPR011998; V: glyE Ig-like.
InterPro; IPR011998; V: glyE Ig-like.
InterPro; IPR011998; V: glyE Ig-like.
InterPro; IPR011998; V: glyE Ig-like.
InterPro; IPR011998; V: glyE Ig-like.
InterPro; IPR011998; V: glyE Ig-like.
InterPro; IPR011998; V: glyE Ig-like.
InterPro; IPR011998; V: glyE Ig-like.
InterPro; IPR011998; V: glyE Ig-like.
InterPro; IPR011998; V: glyE Ig-like.
InterPro; IPR011998; V: glyE Ig-like.
InterPro; IPR011998; V: glyE Ig-like.
InterPro; IPR011998; V: glyE Ig-like.
InterPro; IPR011998; V: glyE Ig-like.
InterPro; IPR011998; V: glyE Ig-like.
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07-DEC-2004, sequence version 1.
07-PEB-2006, entry version 8.
07-PEB-2006, entry version 8.
Dengue virus type 2.
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RESULT 20
RESULT 20
RESULT 20
DEC-1004
DT 07-DEC-2004, Integrated into Un
DT 07-DEC-2004, Sequence version 1
DT 07-DEC-2004, Sequence version 1
DT 07-PEB-2006, Sequence version 3
DE 07-PEB-2006, Sequence version 3
DE POLYPROTEIN (Fragment).
OC Viruses; SSRNA POSITIVE-Strand
OC Flavivirus; Dengue virus group
ON NCBL TAXID-11060;
RN (1)
RP NUCLECTIDE SEQUENCE.
RC STRAIN-12021/Oxkutzcab 01;
RX Pubmed=15516647;
RA Lorono-Pino M.A., Farfan-Ale J
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NCBI_TaxID=11060;
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Rosado-Paredes E.P., Flores-Flores L.F., Garcia-Rejon J., Diaz F.J.,
Blitvich B.J., Jimenez-Rios E., Blair C.D., Olson K.E., Black W. IV,
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Blitvich B.J., Jimenez-Rios E., Blair C.D., Olson K.E., Black W. IV,
                                                                    "Introduction of the American/Asian genotype of dengue 2 virus into
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Viruses, seRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus, Dengue virus group.
NCBI_TaxID=11060;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           89.1%; Score 49; DB 2; Length 661; 88.9%; Pred. No. 7.4; 1; Indels ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                               EMBL, AY49682, AAS14973.1; -; Genomic_RNA.
SNR; GSV189; 167-560.
GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019031; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:0019038; F:structural molecule activity; IEA.
GO; GO:0019058; F:structural molecule activity; IEA.
GO; GO:0019058; F:structural molecule activity; IEA.
GO; GO:0019058; F:structural molecule activity; IEA.
GO; GO:0019058; F:structural molecule activity; IEA.
InterPro; IPR011999; F:laviglyE_cen_dm.
InterPro; IPR0010535; F:laviglyE_cen_dim.
FFam; PF02832; F:laviglyCop_C; 1.
Ffam; PF02822; F:laviglyCop_C; 1.
Ffam; PF00869; F:laviglyCop_C; 1.
Ffam; PF00164; FlaviglyCop_C; 1.
Ffam; PF00164; FlaviglyCop_C; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       661
73080 MW; 5216054D684173C0 CRC64;
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GO; GO:0016021; C:integral to membrane; IEA.

GO; GO:0019028; C:viral capsid; IEA.

GO; GO:0019031; C:viral envelope; IEA.

GO; GO:0005198; F:structural molecule activity; IEA.
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Am. J. Trop. Med. Hyg. 71:485-492(2004).
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Am. J. Trop. Med. Hyg. 71:485-492(2004).
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PubMed=15516647;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 88.9
Matches 8; Conservative
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PubMed=1551647;
Lorono-Pino M.A., Farfan-Ale J.A., Zapata-Peraza A.L.,, Diaz F.J.,
Rosado-Paredes B.P., Flores-Flores L.F., Garcia-Rejon J., Diaz F.J.,
Blitvich B.J., Jimenez-Rios E., Blair C.D., Olson K.E., Black W. IV,
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Am. J. Trop. Med. Hyg. 71:485-492(2004).
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88.9%; Pred. No. 7.4;
iive 0; Mismatches 1; Indels
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SNR, OSVI91, 167-560.

GO; GO:0016021; C:integral to membrane; IEA.

GO; GO:0019031; C:viral capsid; IEA.

GO; GO:0019031; C:viral envelope; IEA.

GO; GO:005198; F:structural molecule activity; IEA.

GO; GO:0019058; F:structural molecule activity; IEA.

GO; GO:0019058; F:structural molecule activity; IEA.

InterPro; IPR011999; Flav JVE cen_dm.

InterPro; IPR000569; Flavi M.

InterPro; IPR000515; Flavi M.

InterPro; IPR000336; Flavi M.

InterPro; IPR000336; Flavi M.

InterPro; IPR000586; Flavi GlyE G-like.

InterPro; IPR001998; VI GlyE G-like.

Pfam; PF00869; Flavi GlyCopro; I.

Pfam; PF00869; Flavi GlyCopro; I.
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GO; GO:0019058; P:viral infectious cycle; IEA. InterPro; IPR011999; Flav glyE_cen_dm. InterPro; IPR000069; Flavi_M.
InterPro; IPR000535; Flavi_Dropep.
InterPro; IPR000336; Flavi_Dropep.
InterPro; IPR011998; Vil_glyE_cen_dim. Pfam; PF00869; Flavi_glycoprot; I. Pfam; PF00869; Flavi_glycoprot; I. Pfam; PF01004; Flavi_Dropep; I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       07-DEC-2004, integrated into UniProtKB/TrEMBL.
07-DEC-2004, sequence version 1.
07-EBB-2006, entry version 8.
Polyprotein (Fragment).
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Matches 8; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Introduction of the American/Asian genotype of dengue 2 virus into the Yucatan State of Mexico."; Am. J. Trop. Med. Hyg. 71:485-492(2004).
                                                                                                                                                                                                                                                                                                                                       Dengue virus type 2.
Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
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88.9%; Pred. No. 7.4;
tive 0; Mismatches 1; Indels
                       1; Indels
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73024 MW; 367D6F1A9F25932B CRC64;
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Q5V193 9FLAV PRELIMINARY; PRT; 661 AA.
Q5V193; 07-DEC-2004, integrated into UniProtKB/TrEMBI.
07-DEC-2006, sequence version 1.
PCFB-2006, entry version 8.
POlyprotein (Fragment).
                                                                                                                                                                                                          QSV192 9FLAV PRELIMINARY; PRT; 661 AA. QSV192; 07-DEC-2004, integrated into UnibrotKB/TrEMBL. 07-DEC-2004, sequence version 1. 07-FEB-2006, entry version 8. Polyprotein (Fragment).
      Pred. No. 7.4;
                       0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                          NUCLECTIDE SEQUENCE.
STRAIN=C1077/Chilpancingo 97;
PubMed=15516647;
186.88
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    Best Local Similarity 88.9
Matches 8; Conservative
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SEQUENCE
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Q5V193 9FL
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                                                                                                                                                                                                         PubMed=15516647;
Lorono-Pino M.A., Farfan-Ale J.A., Zapata-Peraza A.L., Diaz F.J.,
Rosado-Paredes B.P., Flores-Flores L.F., Garcia-Rejon J., Diaz F.J.,
Blitvich B.J., Jimenez-Rios E., Blair C.D., Olson K.E., Black W. IV,
                                                                                                                                                                                                                                                                                                                          Beaty B.J.; "Introduction of the American/Asian genotype of dengue 2 virus into
Dengue virus type 2.
Viruses; sRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
NCBI_TaxID=11060;
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88.9%; Pred. No. 7.4;
iive 0; Mismatches 1; Indels
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SMR (95479) 167-560.

GO; GO:0019028; C:viral capsid IEA.

GO; GO:0019028; C:viral capsid IEA.

GO; GO:001901; C:viral envelope; IEA.

GO; GO:001901; C:viral envelope; IEA.

GO; GO:0019058; F:viral infectious cycle; IEA.

R InterPro; IPR011999; Flav glyE_cen_dm.

R InterPro; IPR00069; Flavi_M.

R InterPro; IPR000535; Flavi_Dropep.

R InterPro; IPR001998; VI_GlyE_cen_dim.

R Ffam; PP00869; Flavi_GlyCopec; 1.

R Ffam; PF00869; Flavi_GlyCopec; 1.

R Ffam; PF00869; Flavi_GlyCopec; 1.
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                                                                                                                                                                                                                                                                                                                                                                                the Yucatan State of Mexico.";
Am. J. Trop, Med. Hyg. 71:485-492(2004).
                                                                                                                                                                               STRAIN=C-932/Acapulco 97;
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                                                                                                                                                     NUCLEOTIDE SEQUENCE
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Best Local Similarity
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SEQUENCE 66
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Abp57875 Plasmid p Aaw09409 Dengue vi Aay05522 Dengue vi Ad188086 Dengue vi Add28716 Dengue vi	Aar13166 Proteins Aaw66591 Polyprote Aaw66590 Polyprote Aaw6590 Polyprote Aae07987 Attenuate	Aae07986 Wild-type Add93314 DEN2 (Ton Adw12597 M32-40/DE Aae17431 Dengue (D	Aae17437 (95-114)E Aae17438 p(95-114) Adn37494 Dengue vi Adn37501 Dengue vi	Adn37498 Dengue vi Adn37492 Dengue vi Adn37500 Dengue vi	Adn37624 Dengue vi Adn37519 Dengue vi Adn37521 Dengue vi	Adn37616 Dengue vi Adn37523 Dengue vi Adn37621 Dengue vi Adn37604 Dengue vi	Adn37614 Dengue vi Adn37618 Dengue vi Adn37620 Dengue vi Adn37615 Dengue vi	Adn37611 Dengue vi Adn37619 Dengue vi Adn37617 Dengue vi Adn3752 DEN-1/Den Adn37602 DEN-1/Den	Adn37515 Dengue vi Ads76179 Heterodim Adn37622 Dengue vi	Adwo659 Amino aci Adwo6593 Amino aci Adg93320 DENI (Pue Adg93318 DENI (Pue	Amin Deng Wild Atte	Dence Milo Milo Hume Hume	Abb 1323 Human GCR Ade34415 Human GCP Abb 7252 Human G-P Abb 7252 Human nov Adu39808 Novel hum Ade34425 Human nov Ado28977 Human nov	Adq25892 Human gua Aac25061 Human G-p Abu07567 Human G-p Abu1655 Novel hum Adf70474 Orphan re Adw12599 M1-40/DEN Abc69519 Pseudomon Adw92172 Plant ful Abu22889 Protein e
45 80.4 685 6 45 80.4 1127 2 45 80.4 1127 2 45 80.4 1127 7 45 80.4 1127 7 45 80.4 338 8	45 80.4 3391 2 45 80.4 3391 2 45 80.4 3391 2 45 80.4 3391 4	45 80.4 3391 4 45 80.4 3391 8 43 76.8 9 9 43 76.8 40 5	43 76.8 48 5 43 76.8 55 5 43 76.8 167 8 43 76.8 167 8	43 76.8 167 8 43 76.8 167 8 43 76.8 167 8	43 76.8 675 8 43 76.8 675 8 43 76.8 675 8	43 76.8 675 8 43 76.8 675 8 43 76.8 675 8 43 76.8 675 8	43 76.8 675 8 43 76.8 675 8 43 76.8 675 8 . 43 76.8 675 8	43 76.8 675 8 43 76.8 676 8 43 76.8 677 8 43 76.8 677 8 43 76.8 677 8	43 76.8 677 8 43 76.8 679 8 43 76.8 681 8	43 76.8 684 8 43 76.8 715 2 43 76.8 774 8 43 76.8 775 8	43 76.8 798 2 43 76.8 3389 4 43 76.8 3390 4 43 76.8 3391 4	43 76.8 3391 4 43 76.8 3392 4 43 76.8 3392 4 43 76.8 3392 4 42 75.0 278 8 42 75.0 826 5 75.0 826 5	42 75.0 924 5 42 75.0 953 7 42 75.0 994 5 42 75.0 994 5 42 75.0 994 7 42 75.0 994 7	88 42 75.0 994 8 ADQ28892 89 42 75.0 1018 5 AARZ2061 90 42 75.0 1010 6 ABU07567 91 42 75.0 1131 4 ABG11655 93 41 73.2 39 9 ADW12599 94 41 73.2 455 7 ABC69519 95 40 71.4 364 8 ADU22889
5.1.9 Biocceleration Ltd.	Search time 110.25 Seconds (without alignments) 37.324 Million cell updates/sec			: 2589679						l by chance to have a the result being printed,		Adw15582 M1-40/DEN Adw15588 p(95-114) Adw12598 M32-40/DE Adw15595 M32-40/DE Adw12594 M10-40/DE Adw12576 M1-40/DEN Adw12576 M1-40/DEN	200 200 200 200 200 200 200 200 200 200	374 374 374
GenCore version 5.1. Copyright (c) 1993 - 2006 Bioc OM protein - protein search, using sw model	on: August 31, 2006, 11:33:43 ;	Title: DENGUE_SEROTYPE3 Perfect score: 56 Sequence: 1 retwflrhp 9	Scoring table: BLOSUM62 Gapop 10.0 , Gapext 0.5	Searched: 2589679 seqs, 457216429 residues Total number of hits satisfying chosen parameters	Minimum DB seq length: 0 Maximum DB seq length: 200000000	Post-processing: Minimum Match 0% Maximum Match 100% Listing first 100 summaries	A	 3: geneseqp2000s:* 4: geneseqp2001s:* 5: geneseqp2002s:* 6: geneseqp2003as:* 7: geneseqp2003bs:* 	0	Pred. No. is the number of results predicted by chance to h score greater than or equal to the score of the result bein and is derived by analysis of the total score distribution.	* Result Query No. Score Match Length DB ID	51 91.1 45 80.4 21 9 45 80.4 21 9 45 80.4 31 9 45 80.4 32 9 45 80.4 30 9	45 80.4 48 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	15 45 80.4 675 8 ADN37518 16 45 80.4 675 8 ADN37518 17 45 80.4 677 2 AAW75411 19 45 80.4 677 2 AAW75411 20 45 80.4 681 8 ADN37613 21 45 80.4 681 8 ADN37613 22 45 80.4 685 6 ABP57874 23 45 80.4 685 6 ABP57876

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ADW12582;

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The present invention relates to an isolated and purified ApoptoM peptide. The invention is useful as a vaccine for the prevention and readement of pathological conditions from non-specific febrile illnesses to severe hemorrhagic manifestations, encephalitic syndromes and these pathological conditions are linked to Flavivirus infection or cancers. The invention is also useful in gene therapy. The present sequence is a p(95-114) EGFP (enhanced green fluorescent protein) (MI-M40) DEN (dengue) -2 (136F) plasmid DNA encoded protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New isolated and purified ApoptoM peptide comprises 9 amino acids, useful as a vaccine for preventing or treating pathological conditions from nonspecific febrile illnesses to severe hemorrhagic manifestations or encephalitic syndromes.
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                                Gene therapy, protein purification, virucide, cytostatic, vaccine, hemorrhage, bleeding, infection, flavivirus infection, neoplasm, cancer, DEN, dengue, EGFP, enhanced green fluorescent protein.
p(95-114) EGFP(M1-M40)DEN-2 (136F) plasmid DNA encoded protein #3
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                                                                                                                                                                                                                                                                                 /note= "Encoded by GTTTTC"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure; SEQ ID NO 35; 30pp; English.
                                                                                                                                                                                                              /note= "Encoded by GGC"
                                                                                                                                                                                                                                               'note= "Encoded by GAC"
                                                                                                                                                                            Location/Qualifiers
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                                                                                                                                                                                                                                Misc-difference
                                                                                                                                                                                                                                                                 Misc-difference
                                                                                                                                                                                                Misc-difference
                                                                                                                                                                                                                                                                                                                    US2004266987-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 48 AA;
                                                                                                         Dengue virus
                                                                                                                                             Unidentified
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Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New isolated and purified ApoptoM peptide comprises 9 amino acids, useful as a vaccine for preventing or treating pathological conditions from nonspecific febrile illnesses to severe hemorrhagic manifestations or
   PUO-218 s
Human sec
Plant ful
Dengue-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present invention relates to an isolated and purified ApoptoM peptide. The invention is useful as a vaccine for the prevention and treatment of pathological conditions from non-specific febrile illnesses to severe hemorrhagic manifestations, encephalitic syndromes and these pathological conditions are linked to Flavivirus infection or cancers. The invention is also useful in gene therapy. The present sequence is a M1-40/DEN (dengue)-2 (F36) mutant protein.
                                                                                                                                                                                                                                                                                                                                      Gene therapy; protein purification; virucide; cytostatic; vaccine; hemorrhage; bleeding; infection; flavivirus infection; neoplasm; cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
     Aap91166 B
Aag03970 B
Ady10913 B
Aab84901 I
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                                                                                                              ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Example 1; SEQ ID NO 29; 30pp; English.
                     AAG03970
ADY10913
AAB84901
       AAP91166
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                                                                                                                                                                                                                                                                                                   M1-40/DEN-2 (F36) mutant protein
                                                                                                                                                                                                ADW12582 standard; peptide; 39
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                                                                                                                                                                                                                                                                                                                                                                        DEN; dengue; mutant; mutein.
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                                                                                                                                                                                                                                                                    (first entry)
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Best Local Similarity 100.
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161
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661
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (INSP ) INST PASTEUR
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 39 AA;
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Gaps

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8

RESULT 2 ADW12588 ADW12588

EXXXEX.

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nsefnl
New isolated and purified ApoptoM peptide comprises 9 amino acids, useful as a vaccine for preventing or treating pathological conditions from non-specific febrile illnesses to severe hemorrhagic manifestations or
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                                                                                                                                                                                                           The present invention relates to an isolated and purified ApoptoM peptide. The invention is useful as a vaccine for the prevention and treatment of pathological conditions from non-specific febrile illnesses to severe hemorrhagic manifestations, encephalitic syndromes and these pathological conditions are linked to Flavivirus infection or cancers. The invention is also useful in gene therapy. The present sequence is a M20-40/DEN (dengue)-2 mutant protein.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gene therapy, protein purification, virucide, cytostatic, vaccine, hemorrhage; bleeding, infection, flavivirus infection, neoplasm; cancer,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 45; DB 9;
Pred. No. 0.54;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADW12593 standard; peptide; 32 AA.
                                                                                                                                                     Example 3; Fig 4; 30pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 87.5-
7; Conservative
                                                                                            encephalitic syndromes.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14 ETWILRHP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 21 AA;
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                               as a vaccine
specific febr
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1D ADW12593

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New isolated and purified ApoptoM peptide comprises 9 amino acids, useful as a vacalne for preventing or treating pathological conditions from nonspecific febrile illnesses to severe hemorrhagic manifestations or encephalitic syndromes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  peptide. The invention is useful as a vaccine for the prevention and treatment of pathological conditions from non-specific febrile illnesses to severe hemorrhagic manifestations, encephalitic syndromes and these pathological conditions are linked to Flavivirus infection or cancers. The invention is also useful in gene therapy. The present sequence is a M32-40/DEN (dengue)-2 mutant protein.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The present invention relates to an isolated and purified ApoptoM
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Pred. No. 2.1e+06;
; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADW12594 standard; peptide; 21 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Example 3; Fig 4; 30pp; English.
                                                                                                                                                                                                        30-JUN-2003; 2003US-00608029
                                                                                                                                                                                                                                                                     30-JUN-2003; 2003US-00608029
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 80.4
Best Local Similarity 87.5
Matches 7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                          Despres P, Catteau A;
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                                                                                                                                                                                                                                                                                                                                 (INSP ) INST PASTEUR.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 9 AA;
                            Dengue virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Dengue virus
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The invention relates to pro-apoptotic fragments of the Dengue virus (DEN) pRM and E glycoproteins, methods for screening molecules capable of inducing apoptosis and methods of inducing apoptosis in a cell. The invention particularly relates to DEN-1 M (a membrane protein anchored in envelope surrounding the nucleocapabid of the virus) ectodomain sequence. Den-1-C amino acid sequence and DEN-2 M ectodomain sequence. Sequences of the invention are useful for inducing apoptosis in a cell of a patient suffering from cancer or flavivirus infection. They are also useful for screening molecules which inhibit apoptosis. The present sequence is DEN-2 virus M ectodomain. (Updated on 29-AUG-2003 to standardise OS field)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Novel apoptosis inducing polypeptide fragments of Dengue virus-1 or 2 M protein, useful for inducing apoptosis in a cell of a human patient suffering from cancer or flavivirus infection.
                                                           Dengue virus; pRM glycoprotein; E glycoprotein; apoptosis; virucide; cancer; flavivirus infection; cytostatic; DEN-2 M ectodomain.
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                                                                                                                                                                                                                                                                                                                                                                                                        Deubel V,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADW12578 standard; peptide; 40 AA
                Dengue (DEN)-2 virus M ectodomain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 9; Fig 12; 45pp; English.
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Best Local Similarity 87.5%;
Matches 7; Conservative
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                                                                                                                                  Dengue virus; 2.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The present invention relates to an isolated and purified ApoptoM peptide. The invention is useful as a vaccine for the prevention and treatment of pathological conditions from non-specific febrile illnesses pathological conditions, encophalitic syndromes and these pathological conditions are linked to Flavivirus infection or cancers. The invention is also useful in gene therapy. The present sequence is a M1-40/DEN (dengue)-2 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                  Gene therapy, protein purification; virucide, cytostatic, vaccine;
hemorrhage; bleeding; infection; flavivirus infection; neoplasm; cancer;
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                                               Gaps
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  Length 32;
                                            1; Indels
    DB 9;
    Score 45; DB 9;
Pred. No. 0.85;
                                                 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Example 3; SEQ ID NO 23; 30pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAE17432 standard; peptide; 40 AA.
                                                                                                                                                                                                                                                      ADW12576 standard; peptide; 39 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30-JUN-2003; 2003US-00608029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30-JUN-2003; 2003US-00608029
    80.4%;
                          87.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity 87.5
Query Match
Best Local Similarity 87.5
Matches 7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  encephalitic syndromes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Catteau A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (INSP ) INST PASTEUR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ETWILRHP 39
                                                                                                                                      ETWILRHP 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 ETWFLRHP 9
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                                                                                            2 ETWFLRHP 9
                                                                                                                                                                                                                                                                                                                                                                                        M1-40/DEN-2 protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US2004266987-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 39 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Dengue virus
                                                                                                                                                                                                                                                                                                                                             24-MAR-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29-AUG-2003
18-APR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEN; dengue.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Despres P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAE17432;
                                                                                                                                                                                                                                                                                                   ADW12576;
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                                                                                                                                      25
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Gaps

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Length 40; 1; Indels

Catteau A;

Score 45; DB 5; Pred. No. 1.1; 0; Mismatches 1

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WO2003102166-A2
                                                                                                                                                                                  Sequence 48 AA;
                                                                                                                                                                                                                                                                                                                                                                                                             Dengue virus
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                                                                                                                                                                                                                                                                                                                                                                                                                                                 11-DEC-2003.
                                                                                                                                                                                                                                                          41
                                                                                                                                                                                                                                                                                                                         ADN37497;
                                                                                                                                                                                                                                                                                                                                                                                            capsid
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                                                                                                                                                                                                                                                                                      RESULT 10
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                                                                New isolated and purified ApoptoM peptide comprises 9 amino acids, useful
                                                                           preventing or treating pathological conditions from non-
illnesses to severe hemorrhagic manifestations or
                                                                                                                               The present invention relates to an isolated and purified ApoptoM peptide. The invention is useful as a vaccine for the prevention and treatment of pathological conditions from non-specific febrile illnesses to severe hemorrhagic manifestations, encephalitic syndromes and these pathological conditions are linked to Plavivizus infection or cancers. The invention is also useful in gene therapy. The present sequence is a M1-40/YF (yellow fever).17D (T34, 136, 137, H39) mutant protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Novel apoptosis inducing polypeptide fragments of Dengue virus-1 or 2 M protein, useful for inducing apoptosis in a cell of a human patient
                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                         Dengue virus, pRM glycoprotein, E glycoprotein, apoptosis, virucide, cancer, flavivirus infection, cytostatic, EGFP, DEN-2 protein, enhanced green fluorescent protein, fusion protein, M ectodomain.
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                                                                                                                                                                                                                             Score 45; DB 9; Length 40; Pred. No. 1.1;
                                                                                                                                                                                                                                                1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Catteau A;
                                                                                                                                                                                                                                                0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note= "Encoded by GTTATC"
                                                                                                                                                                                                                                                                                                                                                                                       (95-114)EGFP(206-245)DEN-2 fusion protein.
                                                                                                              Example 3; SEQ ID NO 25; 30pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Deubel V,
                                                                                                                                                                                                                                                                                                                                 AAE17433 standard; protein; 48 AA
                                                                                                                                                                                                                             80.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18-JUN-2001; 2001WO-IB001570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          16-JUN-2000; 2000US-0212129P
                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                      Best Local Similarity 87.5
Matches 7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Courageot M,
                                                                                            encephalitic syndromes
                            Catteau A;
         (INSP ) INST PASTEUR
                                                                                                                                                                                                                                                                              ||| ||| ETWILRHP 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (INSP ) INST PASTEUR
                                                                                                                                                                                                                                                                 ETWFLRHP 9
                                              WPI; 2005-047647/05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2002-139706/18.
N-PSDB; AAD27335.
                                                                                                                                                                                                                                                                                                                                                                                                                                               Dengue virus; 2.
Dengue virus; 1.
Unidentified.
                                                                          as a vaccine for
specific febrile
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Key
Misc-difference
                                                                                                                                                                                                          Sequence 40 AA;
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                                                                                                                                                                                                                                                                                                                                                                       18-APR-2002
                            Despres P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20-DEC-2001
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                                                                                                                                                                                                                             Query Match
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The invention relates to pro-apoptotic fragments of the Dengue virus (DEN) pRM and E glycoproteins, methods for screening molecules capable of inducing apoptoasis and methods of inducing apoptoasis in a cell. The invention particularly relates to DEN-1 M (a membrane protein anchored in envelope surrounding the nucleocapsid of the virus) ectodomain sequence, Den-1-C amino acid sequence and DEN-2 M ectodomain sequence. Sequences of the invention are useful for inducing apoptosis in a cell of a patient suffering from cancer or flavivirus infection. They are also useful for screening molecules which inhibit apoptosis. The present sequence is (95-114) EGFO6-245) DEN-2 fusion protein construct. This construct comprises 95-114 of the C-terminus of the C-protein of the DEN-1 virus strain BR/90 fused to the N-terminus of enhanced green fluorescent protein (EGFP) and DEN-2 virus strain Jamaica M ectodomain (DEN-2 polyprotein) fused to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention relates to a novel recombinant or synthetic polypeptide comprising an amino acid sequence that has at least about 90% sequence identity to any of the 20 fully defined amino acid sequences given in the specification. The polypeptide of the invention demonstrates virucide activity and may be useful for inducing an immune response to structide allowiruses (arboviruses group B), including Dempue viruses, as well as in detecting and/or diagnosing the presence of antibodies against the Dengue virus serotypes in a sample and for gene therapy. The current
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New recombinant or synthetic polypeptides and polynucleotides useful for diagnosing, preventing or treating diseases associated with flaviviruses, including dengue viruses.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  virucide; Flavivirus; arboviruses group B; gene therapy; truncated prM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Dengue virus C15/truncated prM antigen fusion protein - SEQ ID 122.
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suffering from cancer or flavivirus infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 45; DB 5;
Pred. No. 1.3;
0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADN37497 standard; protein; 167 AA.
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                                                                                Claim 42; Fig 11; 45pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C-terminus of the EGFP sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               80.4%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ETWILRHP 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Punnonen J,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2004-043106/04
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Best Local Similarity
Matches 7; Conserv
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dengue serotype3.rag

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RESULT 12
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The invention relates to a novel recombinant or synthetic polypeptide comprising an amino acid sequence that has at least about 90% sequence identity to any of the 20 fully defined amino acid sequences given in the specification. The polypeptide of the invention demonstrates virucide activity and may be useful for inducing an immune response to Plaviviruses (arboviruses group B), including Dengue viruses, as well as in detecting and/or diagnosing the presence of antibodies against the Dengue virus serotypes in a sample and for gene therapy. The current sequence is that of a Dengue virus type 2 (DEN-2) C15/truncated prM amining fusion protein of the invention which comprises the C-terminal 15 amino acids of the capsid protein fused to a truncated form of the prM protein lacking the C-terminal 15 amino acids.
                늉
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      wew recombinant or synthetic polypeptides and polynucleotides useful for diagnosing, preventing or treating diseases associated with flaviviruses, including dengue viruses.
sequence is that of a Dengue virus C15/truncated prW antigen fusion protein of the invention which comprises the C-terminal 15 amino acids the capsid protein fused to a truncated form of the prW protein lacking the C-terminal 15 amino acids.
                                                                                                                                                                                                                                                                                                                    virucide; Flavivirus; arboviruses group B; gene therapy; truncated prM;
                                                                                                                                                                                                                                                                                             Dengue virus type 2 (DEN-2) C15/truncated prM antigen fusion protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                              Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     80.4%; Score 45; DB 8; Length 171; 87.5%; Pred. No. 5.2; ive 0; Mismatches 1; Indels
                                                                                       Length 167;
                                                                                                            1; Indels
                                                                                     80.4%; Score 45; DB 8;
87.5%; Pred. No. 5.1;
iive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Disclosure; SEQ ID NO 118; 409pp; English.
                                                                                                                                                                                                                      ADN37493 standard; protein; 171 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Brinkman AM,
                                                                                                                                                                                                                                                                                                                                                                                                                              26-FEB-2003; 2003WO-US005918.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     26-FEB-2002; 2002US-0360030P
                                                                                                                                                                                                                                                                     (first entry)
                                                                         Ouery Match
Best Local Similarity 87.5
7, Conservative
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                                                                                                                                                                                                                                                                                                                                                       Dengue virus type 2.
                                                                                                                                    2 ETWFLRHP 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Punnonen J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2004-043106/04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (MAXY-) MAXYGEN INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 171 AA;
                                                                 Sequence 167 AA;
                                                                                                                                                                                                                                                                                                                                                                              WO2003102166-A2
                                                                                                                                                                                                                                                                                                                               capsid; DEN-2
                                                                                                                                                                                                                                                                     17-JUN-2004
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                                                                                                                                                            140
                                                                                                                                                                                                                                               ADN37493;
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                                                                                                                                                                                               RESULT 11
                                                                                                                                                                                                            ADN37493
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New recombinant or synthetic polypeptides and polynucleotides useful for diagnosing, preventing or treating diseases associated with flaviviruses, including dengue viruses.

Brinkman AM;

Punnonen J,

Apt D,

WPI; 2004-043106/04

(MAXY-) MAXYGEN INC

26-FEB-2003; 2003WO-US005918 26-FEB-2002; 2002US-0360030P

WO2003102166-A2 Dengue virus.

11-DEC-2003

virucide; Flavivirus; arboviruses group B; gene therapy; truncated prM;

Dengue virus C15/truncated prM antigen fusion protein - SEQ ID 121.

(first entry)

17-JUN-2004

ADN37496;

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ADN37496 standard; protein; 171

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                             The invention relates to a novel recombinant or synthetic polypeptide comprising an amino acid sequence that has at least about 90% sequence identity to any of the 20° fully defined amino acid sequences given in the specification. The polypeptide of the invention demonstrates virucide activity and may be useful for inducing an immune response to Flaviviruses (arboviruses group B), including Dengue viruses, as well as in detecting and/or diagnosing the presence of antibodies against the Dengue virus serotypes in a sample and for gene therapy. The current sequence is that of a Dengue virus C15/truncated prM antigen fusion protein of the invention which comprises the C-terminal 15 amino acids of the capsid protein fused to a truncated form of the protein lacking
                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
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                                                                                                                                                                                                                                                                                                                                                                       8; Length 171;
                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Fusion protein PD30 contains Dengue virus epitope
                                                                                                                                                                                                                                                                                                                                                                                                                1;
                                                                                                                                                                                                                                                                                                                                                                     Score 45; DB (
Pred. No. 5.2;
                                                                                                                                                                                                                                                                                                                                                                                                                0; Mismatches
Disclosure; SEQ ID NO 121; 409pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAW75410 standard; peptide; 635 AA.
                                                                                                                                                                                                                                                                                                                                                                   Match 80.4%;
Local Similarity 87.5%;
les 7; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (revised)
(first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 ETWFLRHP
                                                                                                                                                                                                                                                                                                                              Sequence 171 AA;
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25-MAR-2003
02-MAR-1999
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Matches
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144 ETWILRHP 151

2 ETWFLRHP 9

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26-FEB-2002; 2002US-0360030P
                                                                                                                                                                                                                                                                                Sequence 675 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Dengue virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                  17-JUN-2004
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                                                                                                                                                                                                                                                                                                                                                                                                                              ADN37518;
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                                        Apt D,
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                                                                                                                                                                                                                                                                                                                                                                                       RESULT 15
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                                                                                                                                                                           G, Guillen Nieto GE, Pardo Lazo OL;
3, Pupo Antunez M, Rodriguez Roche R;
Padron Palomares G, Alvarez Vera M;
Pelegrino Martinez De La Coterri Pedro;
                                                                                                                                                                                                                                                                                                       This protein represents a fusion protein comprising an M protein epitope from Dengue virus type 2 inserted into the P64K protein from Neisseria meningitidis. Synthetic peptides based on the Dengue virus epitope sequences (AAM75404-M75408) and fusion proteins can be used to raise antibodies. The peptides, protein and antibodies are all useful for diagnosis and treatment of Flavivirus infection, e.g. in vaccines. (Updated on 25-MAR-2003 to correct PI field.) (Updated on 17-OCT-2003 to standardise OS field)
                                                                                                                                                                                                                                               New peptide(s) and fusion proteins useful for diagnosis and treatment of flavivirus infection - contain cross-reactive epitopes from Dengue virus pre-M/M protein and can induce neutralising antibodies.
                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
Dengue virus; fusion protein; P64K; Neisseria meningitidis; epitope;
antibody; diagnosis; Plavivirus; infection; vaccine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         virucide; Flavivirus; arboviruses group B; gene therapy; C15/prM/E; human codon-optimised; prM; envelope; capsid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Dengue virus C15/prM/E part codon-optimised antigen fusion protein
                                                                                                                                                                                                                                                                                                                                                                                                                                       ;
                                                                                                                                                                                                                                                                                                                                                                                                                  Score 45; DB 2; Length 635;
Pred. No. 22;
0; Mismatches 1; Indels
                                                                                                                                                CIGB CENT ING GENETICA & BIOTECNOLOGIA.

IPK INST MEDICINA TROPICAL KOURI PEDRO.
                                                                                                                                                                             Guzman Tirado G,
                                                                                                                                                                  Vazquez Ramudo S, Guzman Illand
Chinea Santiago G, Perez Diaz AB,
Reyes Acosta O, Garay Perez HE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADN37628 standard; protein; 675 AA.
                                                                                                                                                                                                                                                                                      Claim 7; Page 28-29; 64pp; Spanish
                                                                                                          98WO-CU000001.
                                                                                                                             97CU-00000013
                                                                                                                                                                                                                                                                                                                                                                                                                   87.5%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                       7; Conservative
                                        Neisseria meningitidis.
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                                                                                                                                                                                                                            WPI; 1998-414111/35.
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                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                               Sequence 635 AA;
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                                                                                                                                               (CIGB-) CIGB
                              Dengue virus
                                                                    WO9831814-A1
                                                                                                          13-JAN-1998;
                                                                                                                             15-JAN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Dengue virus.
Synthetic.
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                                                                                      23-JUL-1998
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                                                 Chimeric.
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                                                                                                                                                                                                                                                            New recombinant or synthetic polypeptides and polynucleotides useful for diagnosing, preventing or treating diseases associated with flaviviruses, including dengue viruses.
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envelope; capsid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 675;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    80.4%; Score 45; DB 8; llarity 87.5%; Pred. No. 23; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                               Example 28; SEQ ID NO 253; 409pp; English.
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                                                                             Brinkman AM;
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                                                                                                                                               WPI; 2004-043106/04.
N-PSDB; ADN37632.
                                                                             Punnonen J,
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(MAXY-) MAXYGEN INC
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Matches 7; Conserv
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The invention relates to a novel recombinant or synthetic polypeptide comprising an amino acid sequence that has at least about 90% sequence identity to any of the 20 fully defined amino acid sequences given in the specification. The polypeptide of the invention demonstrates virucide activity and may be useful for inducing an immune response to Plaviviruses (arboviruses group B), including Dengue viruses, as well as in detecting and/or diagnosing the presence of antibodies against the Dengue virus serotypes in a sample and for gene therapy. The current sequence is that of the Dengue Virus C15/pm//B antigen Kusion protein of the invention which comprises 15 amino acids of the capaid (c) protein fused to the full-length prM protein and envelope (E) protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The invention relates to a novel recombinant or synthetic polypeptide comprising an amino acid sequence that has at least about 90% sequence identity to any of the 20 fully defined amino acid sequences given in the specification. The polypeptide of the invention demonstrates virucide activity and may be useful for inducing an immune response to Plaviviruses (arboviruses group B), including Dengue viruses, as well as in detecting and/or diagnosing the presence of antibodies against the Dengue virus serotypes in a sample and for gene therapy. The current sequence is that of the Dengue Virus C15/Pm//S antigen fusion protein of the invention which comprises 15 amino acids of the capsid (C) protein fused to the full-length prM protein and envelope (E) protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New recombinant or synthetic polypeptides and polynucleotides useful for diagnosing, preventing or treating diseases associated with flaviviruses, including dengue viruses.
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                                                                                                                                                                                                                                                                                                          Gaps
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                                                                                                                                                                                                                                                                      8; Length 675;
                                                                                                                                                                                                                                                                                                        1; Indels
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Pred. No. 23;
                                                                                                                                                                                                                                                                                                        0; Mismatches
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                                                                                                                                                                                                                                    Sequence 675 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New recombinant or synthetic polypeptides and polynucleotides useful for diagnosing, preventing or treating diseases associated with flaviviruses, including dengue viruses.
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                                                                                                                                                                                                                                                                 Dengue virus C15/prM/E part codon-optimised antigen fusion protein
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8; Length 675;
                             1; Indels
Score 45; DB 8
Pred. No. 23;
0; Mismatches
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                                                                                                                                                                        ADN37626 standard; protein; 675 AA.
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 80.4%;
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Matches 7; Conservative
Query Match
Best Local Similarity 87.5
Matches 7; Conservative
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                                                               2 ETWFLRHP 9
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                                                                                                                                                                                                                                                                                                                                             Dengue virus.
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                                                                                                                                                                                                       ADN37626;
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                                                                                                                                           RESULT 17
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ID AAW7
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(first entry)
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Matches 7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 140 ETWILRHP 147
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Dengue virus type 2.
                                                                                                               (MAXY-) MAXYGEN INC
                                                                                                                                                            WPI; 2004-043106/04
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                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 ETWFLRHP
                                                                                                                                                                                                                                                                                                                                                                                        Sequence 677 AA;
                        WO2003102166-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO2003102166-A2
  Dengue virus.
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                                             11-DEC-2003
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                                                                                                                                     Apt D,
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   셤
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                                                                                                                                                                                                                                                                                                        Vazquez Ramudo S, Guzman Tirado G, Guillen Nieto GE, Pardo Lazo OL;
Chinea Santiago G, Perez Diaz AB, Pupo Antunez M, Rodriguez Roche R;
Reyes Acosta O, Garay Perez HE, Padron Palomares G, Alvarez Vera M,
Morier Diaz L, Perez Insuita O, Pelegrino Martinez De La Coterri Pedro,
                                                                                                                                                                                                                                                                                                                                                                                                                                                       This protein represents a fusion protein comprising an M protein epitope from Dengue virus type 4 inserted into the P64K protein from Neisseria meningitidis. Synthetic peptides based on the Dengue virus epitope sequences (AAM75404-W75408) and fusion proteins can be used to raise antibodies. The peptides, protein and antibodies are all useful for diagnosis and treatment of Flavivirus infection, e.g. in vaccines. (Updated on 25-WAR-2003 to correct P1 field.) (Updated on 17-OCT-2003 to
                                                                                                                                                                                                                                                                                                                                                                                     New peptide(s) and fusion proteins useful for diagnosis and treatment of flavivirus infection - contain cross-reactive epitopes from Dengue virus pre-M/M protein and can induce neutralising antibodies.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  virucide; Flavivirus; arboviruses group B; gene therapy; C15/prM/E; prM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                 Dengue virus, fusion protein, P64K, Neisseria meningitidis, epitope, antibody, diagnosis, Flavivirus, infection, vaccine.
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Pred. No. 23;
0; Mismatches 1; Indels
                                                                            Fusion protein PD34 contains Dengue virus epitope.
                                                                                                                                                                                                                                                                       (CIGB-) CIGB CENT ING GENETICA & BIOTECNOLOGIA. (IPKM-) IPK INST MEDICINA TROPICAL KOURI PEDRO.
                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 7; Page 30-32; 64pp; Spanish.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADN37613 standard; protein; 677 AA
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                                            (revised)
(first entry)
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                                                                                                                                               Neisseria meningitidis
                                  (revised)
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Best Local Similarity
7, Conserv?
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                                                                                                                                  Dengue virus
                                                                                                                                                                               WO9831814-A1
                                                                                                                                                                                                                            13-JAN-1998;
                                                                                                                                                                                                                                                  15-JAN-1997;
                                17-OCT-2003
                                           25-MAR-2003
02-MAR-1999
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                                                                                                                                                                                                     23-JUL-1998
           AAW75411;
                                                                                                                                                           Chimeric.
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                                                                                                                                                                                                                                                                                                                                                                                                         New recombinant or synthetic polypeptides and polynucleotides useful for diagnosing, preventing or treating diseases associated with flaviviruses, including dengue viruses.
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Den-2C15/prM/E; prM; envelope; capsid.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             80.4%; Score 45; DB
87.5%; Pred. No. 23;
ive 0; Mismatches
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                                                                                                                                                                                                                                               Punnonen J, Brinkman AM,
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26-FEB-2003; 2003WO-US005918
                                                                            26-FEB-2002; 2002US-0360030P
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                                                                                                                       The invention relates to a novel recombinant or synthetic polypeptide comprising an amino acid sequence that has at least about 90% sequence identity to any of the 20 fully defined amino acid sequences given in the specification. The polypeptide of the invention demonstrates virucide activity and may be useful for inducing an immune response to Plaviviruses (arboviruses group B), including Dengue viruses, as well as in detecting and/or diagnosing the presence of antibodies against the Dengue virus serotypes in a sample and for gene therapy. The current antigen is that of the Dengue virus type 2 (DEN-2) Den-2CIS/prM/E antigen fusion protein of the invention which comprises 15 amino acids of the capsid (C) protein fused to the full-length prM protein and envelope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The invention relates to a novel recombinant or synthetic polypeptide comprising an amino acid sequence that has at least about 90% sequence identity to any of the 20 fully defined amino acid sequences given in the specification. The polypeptide of the invention demonstrates virucide activity and may be useful for inducing an immune response to Plaviviruses (arboviruses group B). Including Dengue viruses, as well as in detecting and/or diagnosing the presence of antibodies against the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New recombinant or synthetic polypeptides and polynucleotides useful for diagnosing, preventing or treating diseases associated with flaviviruses, including dengue viruses.
New recombinant or synthetic polypeptides and polynucleotides useful for diagnosing, preventing or treating diseases associated with flaviviruses, including dengue viruses.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 virucide; Flavivirus; arboviruses group B; gene therapy; C15/prM/E; prM;
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                                                                                                                                                                                                                                                                                                                                                                                             8; Length 681;
                                                                                                                                                                                                                                                                                                                                                                                                                              1; Indels
                                                                                                                                                                                                                                                                                                                                                                                           Score 45; DB 8; Pred. No. 24; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 40; SEQ ID NO 142; 409pp; English.
                                                                                          Claim 38; SEQ ID NO 228; 409pp; English
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                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity 87.8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      envelope; capsid.
                                                                                                                                                                                                                                                                                                                                                            Sequence 681 AA;
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                                                                                                                                                                                                                                                                                                                           protein.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Novel isolated nucleic acid useful as vaccine for preventing flavivirus infection, comprises transcriptional unit encoding signal sequence of one flavivirus and immunogenic flavivirus antigen of a second flavivirus.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    transcriptional unit encoding a signal sequence of a structural protein of a first flavivirus and an immunogenic flavivirus antigen of a second flavivirus, where the transcriptional unit directs the synthesis of the antigen. The polynucleotide of the invention has virucide activity, and acts as a vaccine. A composition of the invention is useful for immunising a subject against infection by a flavivirus. The polynucleotide is useful as a vaccine for preventing flavivirus infection. The sequence represents plasmid pCBD2-14-6, which contains
Dengue virus serotypes in a sample and for gene therapy. The current sequence is that of the Dengue virus CIS/prw/Le antigen fusion protein the invention which comprises 15 amino acids of the capsid (C) protein fused to the full-length prM protein and envelope (E) protein.
                                                                                                                                                                                                                                                                                                                                                                                                       Flavivirus; immunogenic flavivirus antigen; virucide; vaccine; prM-E;
                                                                                                                                          Gaps
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                                                                                                             8; Length 681
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                                                                                                                                          1; Indels
                                                                                                                                                                                                                                                                                                                                                                         Plasmid pCBD2-14-6 containing dengue-2 virus prM and
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Pred. No. 24;
0; Mismatches
                                                                                                           Score 45; DB 8
Pred. No. 24;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                dengue-2 virus (DEN-2) prw and E proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Example 20; Page 157-158; 174pp; English
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                                                                                                                                                                                                                                                                                  ABP57874 standard; protein; 685
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ilarity 87.5%;
Conservative
                                                                                                           Query Match
Best Local Similarity 87.5%;
Matches 7; Conservative
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                                                                                                                                                                                                       144 ETWILRHP 151
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Best Local.Similarity
7; Conserve
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                                                                                Sequence 681 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Dengue-2 virus.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unidentified
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chimeric.
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115. .205
/label= Pre-membrane
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/label= Membrane
281. .775
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/label= Capsid
                                                                                                   04-APR-2002; 2002WO-US010764.
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                                                                                                                                                                                                                                                                                                                                                                                                                     80.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Dengue virus; serotype 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 148 ETWILRHP 155
                                                                                                                                                                                  WPI; 2003-058572/05.
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Best Local Similarity
7; Conserve
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                                                           WO200281754-A1.
                               Unidentified.
                                                                               17-OCT-2002
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19-MAY-1997
                                            Synthetic
                                                                                                                                                               Chang GJ;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                             Novel isolated nucleic acid useful as vaccine for preventing flavivirus infection, comprises transcriptional unit encoding signal sequence of one flavivirus and immunogenic flavivirus antigen of a second flavivirus.
                                                                                                                                                                                                                                                                                                                                                                                                       The invention relates to a novel nucleic acid comprising a transcriptional unit encoding a signal sequence of a structural protein of a first flavivirus and an immunogenic flavivirus antigen of a second flavivirus, where the transcriptional unit directs the synthesis of the antigen. The polynucleotide of the invention has virucide activity, and acts as a vaccine. A composition of the invention is useful for immunising a subject against infection by a flavivirus. The polynucleotide is useful as a vaccine for preventing flavivirus contains dengue-2 virus (DEN-2) prW, M and E, and Japanese encephalitis virus E proteins
                                                                                                                               Flavivirus; immunogenic flavivirus antigen; virucide; vaccine; prM-E; pCB8D2-2J-2-9-1; Japanese encephalitis virus; dengue-2 virus; DEN-2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 45; DB 6; Length 685;
Pred. No. 24;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                      Example 20; Page 168-169; 174pp; English.
                                                                                                           Plasmid pCB8D2-2J-2-9-1 protein product
                                                                                                                                                                                                                                                                          (USSH ) US DEPT HEALTH & HUMAN SERVICES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Plasmid pCB9D2-IJ-4-3 protein product
                                                 ABP57876 standard; protein; 685 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABP57875 standard; protein; 685 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     80.4%;
                                                                                                                                                                                                                                  04-APR-2002; 2002WO-US010764.
                                                                                                                                                                                                                                                       04-APR-2001; 2001US-00826115.
                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 87.5
Matches 7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         148 ETWILRHP 155
  ETWILRHP 155
                                                                                                                                                                                                                                                                                                                 WPI; 2003-058572/05.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2 ETWFLRHP 9
                                                                                                                                                                                                                                                                                                                            N-PSDB; ABV77549.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 685 AA;
                                                                                                                                                                                         WO200281754-A1.
                                                                                                                                                             Unidentified
                                                                                        07-FEB-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         07-FEB-2003
                                                                                                                                                                                                              17-0CT-2002
                                                                                                                                                                        Synthetic.
148
                                                                                                                                                                                                                                                                                               Chang GJ;
                                                                    ABP57876;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABP57875;
                              RESULT 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ABP5787

1D AB

XX

AC ABI

XX

DT 07-

XX

DE P12
                                          ABP578
유
                                                  g
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Novel isolated nucleic acid useful as vaccine for preventing flavivirus infection, comprises transcriptional unit encoding signal sequence of one flavivirus and immunogenic flavivirus antigen of a second flavivirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   contains
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The invention relates to a novel nucleic acid comprising a transcriptional unit encoding a signal sequence of a structural protein of a first flavivirus and an immunogenic flavivirus antigen of a second flavivirus, where the transcriptional unit directs the synthesis of the antigen. The polynucleotide of the invention has virucide activity, and acts as a vaccine. A composition of the invention is useful for immunishing a subject against infection by a flavivirus. The polynucleotide is useful as a vaccine for preventing flavivirus infection. The sequence represents plasmid pCB9D2-IJ-4-3, which contains dengue-2 virus (DEN-2) prM, M and E, and Japanese encephalitis virus E
Flavivirus, immunogenic flavivirus antigen; virucide, vaccine, prM-E, pCB9D2-IJ-4-3; Japanese encephalitis virus; dengue-2 virus; DEN-2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEN-2; flavivirus; envelope protein; immunisation; vaccine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 685;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Dengue virus serotype 2 PR159/S1 polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 45; DB Pred. No. 24; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Example 20; Page 162-164; 174pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (USSH ) US DEPT HEALTH & HUMAN SERVICES.
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27-JUL-1998;
                                                                                                                31-JUL-1997;
                                                        WO9906068-A2
                                                                          11-FEB-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADL98086;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                           Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Dengue
         Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADL98086
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ô
                                                                                                                                                                                                                                                                                                               A polypeptide (AAW09409) comprises the capsid, pre-membrane, envelope and NS1 proteins of dengue virus serotype 2 (DEN-2) variant PR159/S1. A conservative mutation in the envelope protein may be involved in the attenuation of this small-plaque, temp. sensitive variant. Portions of the envelope protein, esp. domain B, can be expressed in eukaryotic hosts (see also AAW09410 and AAW09427-28) transfected with vectors incorporating DEN-2 S1 cDNA (see also AAT47666). These polypeptides can be used in novel subunit vaccines against viral infection, to raise antibodies useful for passive immunisation, and for diagnosis of infection. (Updated on 17-OCT-2003 to standardise OS field)
                          /note= "amino acid residue 588 (Val) is Ile in wild-type
PR159"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                      Sub:unit vaccine against flavivirus infection - contg. recombinant envelope protein in secretable form, used for immunising against flavivirus infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Flavivirus; envelope protein; vaccine; infection; diagnosis
                                                                                                                                                                                                                                                                                                                                                                                                                                             80.4%; Score 45; DB 2; Length 1127; 87.5%; Pred. No. 41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Dengue virus serotype 2 PR159/S1 viral capsid, pprM, E, NS1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Mismatches
                                                                                                                                                                                      (HAWA-) HAWAII BIOTECHNOLOGY GROUP INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAY05522 standard; protein; 1127 AA.
                                                                                                                                                                                                                                                                                               Example 1; Fig 3A-D; 121pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
          296. .395
/label= Domain-B
 /label= Envelope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1. .114
/label= Capsid
115. .205
                                                                                                                                                                                                        Nakano E, Clements D;
                                                                                                                                              95US-00448734.
95US-00488807.
95US-00500469.
                                                                                                                             96WO-US007627.
                                                       776. .1127
/label= NS1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Dengue virus; serotype 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity 87.5
nes 7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      238 ÉTWILRHP 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 ETWFLRHP 9
                                                                                                                                                                                                                           WPI; 1997-020938/02.
N-PSDB; AAT47666.
                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 1127 AA;
                            Misc-difference
                                                                                                                                              24-MAY-1995;
07-JUN-1995;
10-JUL-1995;
                                                                                      WO9637221-A1
                                                                                                                           24-MAY-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17-OCT-2003
05-JUL-1999
                                                                                                         28-NOV-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAY05522;
                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                        IVY JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Protein
                                                         Region
            Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAYOS522
IID AAYO
XX AC AAYO
XXX
XX III-C
DJT II-C
XXX
XXX Elan
XXX
XXX Flan
XXX
XX Flan
XXY
XXY
XYY
XYY
YFT Prot
 문
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This sequence is composed of the capsid, prM, envelope (E) and NS1

C proteins of serotype 2 dengue virus DEN-2 strain PR159/S1. A vaccine for

protecting against flavivirus infection comprises a dimeric 80% E protein

C that has been secreted as a recombinant protein from a eukaryotic cell.

SOA E indicates a C-terminally truncated flavivirus E protein. The

Gimeric truncated E is formed: (1) by directly linking 2 tandem copies of

Gimeric truncated E is formed: (2) via the formation of a leucine zipper

CC dimeric truncated the homodimeric association of 2 leucine zipper

CC domain through the homodimeric association of 2 leucine zipper

CC domain through the homodimeric associated four-helix bundle domain formed

CC each fused to the C-terminus of an 80% E molecule; or (3) via the

C formation of a non-covalently associated four-helix bundle domain formed

CU upon association of two helix-turn-helix moleties attached to the C-

CC terminus of an 80% E molecule. Dimeric truncated DEN-2 E proteins are

CC terminus of an 80% E molecule. Dimeric truncated DEN-2 E proteins are

CC terminus of an 80% E molecule. Dimeric truncated DEN-2 E proteins are

CC terminus of an 80% E molecule. Dimeric truncated DEN-2 E proteins are

CC terminus of an 80% E molecule. Dimeric truncated DEN-2 E proteins are

CC terminus of an 80% E molecule. Dimeric truncated DEN-2 E proteins are

CC terminus of an 80% E comprises amino

CC acids 1-395 of DEN-2 E. The products can also be used for diagnosis of

infection. (Updated on 17-OCT-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Recombinant dimeric flaviviral envelope vaccine - comprising a dimeric 80% protein, useful for protecting against flavivirus, especially dengue virus infections.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Dengue virus; DEN-2; Envelope protein; 80% E; membrane protein; capsid protein; NS1 protein; Dengue haemorrhagic fever; DHF; Dengue shock syndrome; DSS; flavivirus; vaccine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 2; Length 1127;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Coller BG, Mcdonnell M, Harada KE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 45; DB 2
Pred. No. 41;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (HAWA-) HAWAII BIOTECHNOLOGY GROUP INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Dengue virus type 2; strain PR159/S1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADL98086 standard; protein; 1127 AA.
/label= PreMembrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Example 1; Fig 3A-D; 60pp; English.
                                   206. .280
/label= Membrane
280. .1127
/label= Envelope
                                                                                                                                                                                                                                                                                                                                                                                                                         98WO-US015447.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       h 80.4%;
Similarity 87.5%;
7; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             97US-00904227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    18-NOV-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      238 ÉTWILRHP 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ivy JM, Peters ID,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 1999-153454/13.
N-PSDB; AAX25114.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 ETWFLRHP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 1127 AA;
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Harada K;

IVY JM,

Coller BG, Mcdonell M,

99US-00376463 97US-00904227

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New vaccines for preventing or diagnosing infections caused by dengue virus comprises a therapeutic amount of a dimeric 80%E protein secreted
                                                                                                                               (HAWA-) HAWAII BIOTECHNOLOGY GROUP INC
                                                                                                                                                                                                                                                                          Example 1; SEQ ID NO 3; 47pp; English.
                                                                                                                                                                                                                                                from Drosophila Schneider cells.
                                                                                                                                                                                 WPI; 2004-438725/41.
N-PSDB; ADQ28715.
  Dengue virus.
                            US6749857-B1
                                                                                                      31-JUL-1997;
                                                                              18-AUG-1999;
                                                     15-JUN-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28-NOV-2002.
                                                                                                                                                         Peters ID,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAE35314;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAE3531
    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention relates to a vaccine for protection against Flavivirus infection comprising a dimeric 80% envelope (E), which has been secreted as a recombinantly produced protein from Drosophila Schneider cells and which represents the N-terminal 80% portion of the protein from residue 1 cross included are a method for protecting a subject against a Flavivirus, an immunogenic polypeptide comprising a dimeric 80% E, an immunogenic composition for protection against Flavivirus infection composition for protection against Plavivirus infection comprising the immunogenic polypeptide and a carrier, an immunodiagnostic for detecting Plavivirus comprising the immunogenic polypeptide and a carrier, an immunodiagnostic for detecting Plavivirus in a test subject. The 80% E products are envelope proteins of serotypes comprising DEN-1, DEN-2, DEN-3 or DEN-4. The Flavivirus is a dengue virus. The 80% E products are envelope ricorporating a helix-turn-helix peptide, to encourage dimerisation. The incorporating a helix-turn-helix peptide, to encourage dimerisation. The incorporating a helix-turn-helix peptide, to encourage dimerisation. The bengue haemorrhagic fever, DHF, and Dengue shock syndrome, DSS). The present sequence is encoded by the partial genomic sequence of the DEN-2 are an envelope and represents the capsid, membrane, envelope and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                        Vaccine useful for protection against dengue virus infection, comprises a dimeric 80% envelope, which has been secreted as a recombinantly produced protein from Drosophila Schneider cells.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  virucide, vaccine, Flavivirus, dimeric 80%E, Drosophila Schneider cell; immunogenic composition, multivalent immunodiagnostic, dengue virus, viral capsid, prM gene; E gene; NS1 gene.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 7; Length 1127;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Dengue virus viral capsid, prM, E and NS1 gene polyprotein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1; Indels
                                                                                                                                                                                            Mcdonell M, Ivy JM, Harada K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  80.4%; Score 45; DB
87.5%; Pred. No. 41;
ive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADQ28716 standard; protein; 1127 AA.
                                                                                                                                                                                                                                                                                                           Example 1; Fig 3; 31pp; English.
                                                 20-SEP-2002; 2002US-00247960.
                                                                                       99US-00376463
                                                                           97US-00904227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                          Peters ID, Coller BG,
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Best Local Similarity /
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                                                                                                              PETERS I D.
COLLER B G.
MCDONELL M.
                                                                                                                                                                                                                    WPI; 2003-898503/82.
N-PSDB; ADL98085.
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                                                                                                                                                                    HARADA K.
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US2003175304-A1.
                                                                                                                                                     IVY J M.
                                                                         31-JUL-1997;
                                                                                      18-AUG-1999;
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                         18-SEP-2003
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                                                                                                                                                     (IVYJ/)
(HARA/)
                                                                                                               (PETE/)
                                                                                                                             (COLL/)
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The invention describes a vaccine that generates a protective,

neutralising antibody response to a Flavivirus in a murine host. The

vaccine comprises a therapeutic amount of a dimeric 80%E, the dimeric
80%E having been secreted as a recombinantly produced protein from

Drosophila Schneider cells, and where 80%E represents the N-terminal 80%

portion of the protein from residues 1-395. Also described are: an

immunogenic polypeptide comprising the dimeric 80%E cited above, an

immunogenic composition that generates a protective, neutralising

antibody response to a Flavivirus in a murine host, comprising the above

immunogenic polypeptide and a physiological carrier; a multivalent

immunogenic for the detection of Flavivirus, comprising at least 2

of the above immunogenic polypeptides of at least 2 flaviviral serotypes;

of the above immunogenic polypeptides of at least 2 flavivirus in a test

subject, comprising the above immunogenic or multivalent immunodiagnostic

polypeptide, a suitable support phase coated with dimeric 80%E, and

copplypeptide, a suitable support phase coated with dimeric 80%E, and

The composition is useful for preventing or diagnosing infections caused

by dengue virus. This is the amino acid sequence of the polyprotein

connected by bengue virus gene viral capsid, prM, E and NSI genes for

denceded by virus strain PRIS9/SI used as the source of DEN-2 genes for the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 45; DB 8; Length 1127;
Pred. No. 41;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Dengue virus type 2 strain rDEN2/4delta30 protein.
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Best Local Similarity
7; Conserve
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Detection and identification of Flaviviridae in biological sample - by amplifying consensus sequence then hybridisation opt. followed by typing. e.g. sequencing amplified prod.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The dengue 2 virus is an example of a member of the Flaviviridae which can be identified using the probe pair of the invention. A species-specific sequence can be amplified using the claimed oligonicleotides as primers in a PCR reaction (see AAQ12788 and AAQ12789). Other viruses which can be identified include Japanese encephalitis virus and yellow fever virus. All the dengue 2 virus proteins are encoded from an uninterrupted genomic sequence. (Updated on 25-WAR-2003 to correct PR
                                                                                                                                                                                                                                                                                                                      /label= N-glycosylated
2493. .3391
/label= NS5
                                                                                                                                                    /label= N-glycosylated
1475. .2093
/label= NS3
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           N-glycosylated
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                       128. .1345
|label= NS2A
                                                                                                                  1346. .1474
/label= NS2B
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                                                                                                                                                                                                              2244. .2492
/label= NS4B
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           label=
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Best Local Similarity
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                                                                                                                                                                                                                        The present invention relates to novel mutated flaviviruses comprising a phenotype in which the viral genome is modified by introduction of a mutation, singly or in combination, taken from mutations from recombinant virus bearing Vero adaptation mutations, putative Vero cell adaptation mutations, putative New occll adaptation mutations of dengue type 4 virus (DENA) or mutations known to attenuate dengue type 4 virus. The methods and compositions of the invention are useful for fine tuning the attenuation and growth characteristics of dengue virus vaccines for the prevention and/or treatment of dengue virus resent sequence is bengue virus type 4 strain
                                                                                                                                                      growth
                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                     New mutated flavivirus, useful for fine tuning the attenuation and characteristics of dengue virus vaccines for the prevention and/or treatment of dengue virus infection.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       dengue virus; detection; consensus sequence; Flavivirus; PCR
                                                                                                                                                                                                                                                                                                                                                                                 80.4%; Score 45; DB 6; Length 3388; 87.5%; Pred. No. 1.3e+02;
                                                                                                                                                                                                                                                                                                                                                                                                       1; Indels
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                                                                                                                                                                                                     Disclosure; Page 133-134; 246pp; English
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206. .280
/label= M
281. .775
                                                          US DEPT HEALTH & HUMAN SERVICES. BLANEY J E.
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/label= N-glycosylated
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116. .205
             22-MAY-2002; 2002WO-US016308
                                     22-MAY-2001; 2001US-0293049P
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/label= prM
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(first entry)
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                                                                                             Whitehead SS, Murphy BR,
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Matches 7; Conserv
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21-NOV-1991
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                                                           (USSH )
(BLAN/)
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Length 3391;

Score 45; DB 2; I Pred. No. 1.3e+02;

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0; Gaps

Matches 7; Conservative 0; Mismatches 1; Indels 2 ETWFLRHP 9 ||| |||| 238 ETWILRHP 245 ò

Search completed: August 31, 2006, 11:50:34 Job time: 112.25 secs

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hypothetical prot conserved hypothe EcoA system prote hypothetical prot	probable transport hypothetical prote splicing factor PR colorectal cancer outer membrane lip	lipoate-protein li probable tumor sup hypothetical prote carboxypeptidase-l	acetylornithine de deoxyribodipyrimid interleukin-10 rec	nypotnetical prote hypothetical prote tumor suppressor p	rudimentary protei Holliday junction hymothetical prote	hypothetical procedured hypothetical oxido aryl-alcohol dehyd	aryı-aıconoı denyd aldo/keto reductas tRNA delta-2-isope	conserved hypothet ciliary neurotroph	hypothetical prote antiblotic synthet	hypothetical prote sensory transducti	oxysterol-binding hypothetical prote genome, polyprotein	genome polyprotein dynein heavy chain	conserved hypothet hypothet hypothet	hypothetical prote conserved hypothet	hypothetical proce	conserved hypothet	hypothetical prote	nypotnetical proce chemotactic methyl	 hypothetical prote prote probable tetraacyl 	nitrite reductase spore formation pr	nitrite reductase chorismate mutase	(D)	protein T17H7.13 [Bwallow protein -	. glycoprotein gpV - nitrate transport	hypothetical prote	~ ~ .	two-component sens H+-exporting ATPas alpha-mannosidase	l S
66.1 301 66.1 427 66.1 489 66.1 493	00000	64.3 217 2 64.3 267 2 64.3 343 2 64.3 399 2	64.3 436 2 64.3 481 2 64.3 575 2	64.3 1008 2 64.3 1447 2	64.3 2236 1 62.5 141 2 62.5 246 2	62.5 297 2 62.5 297 2	62.5 306 2 62.5 314 2	62.5 328 2 62.5 372 1 62.5 372 2	62.5 384 2 62.5 879 2	62.5 1231 2 62.5 1243 2	62.5 1310 2 62.5 1467 2 62.5 3411 1	62.5 3411 1 62.5 4196 2	60.7 120 2 60.7 208 2	60.7 216 2 60.7 224 2	60.7 235 2	60.7 246 2	60.7 270 2	60.7 291 2	60.7 312 2 60.7 336 2	60.7 336 2 60.7 338 2	60.7 360 2 60.7 365 1	60.7 365 2	60.7 415 2 60.7 548 2	60.7 560 1	60.7 707 2	60.7 773 2 60.7 805 2	60.7 944 2 60.7 1011 1 60.7 1036 2	60.7 1181 2
30 31 32 33 34		40 41 43 43	4.4.4.5.2.6.2.6.4.4.5.5.6.6.6.6.6.6.6.6.6.6.6.6.6.6.6	/ መ ው	50	5.53	56 57	28 28	62	63		8 9 9 6																
tion Ltd.	17.25 Seconds nments) n cell updates/sec										re a printed		e 6	ne pro	ein - c	olyprot olyprot	olyprot	ein - c	polyprot stein(C,	polyprot polyprot	polyprot polyprot	polyprot	olypro protei	protei	e protei	hetical pr	able sugar ABC ne polyprotein chetical 23.0K	ECE type I restroproper probable protein phosphinothricin
version 5.1.9 - 2006 Biocceleration	model 1:31 ; Search time 17.25 S (without alignments) 50.200 Million cell		5.	residues	parameters: 283416		100% 100 summaries				results predicted by chance to have l to the score of the result being prof the total score distribution.	SUMMARIES	Description	340144 premembrane protei		GNWVD GENOME TO GOOD TO THE CONTROL OF THE CONTROL		JS0219 polyprod		C32401 genome B32401 genome						E86085 hypot		41293 ECOE C 196761 probab 149184 phosph

A;Status: preliminary

ALIGNMENTS

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Query Match
Best Local Similarity 87.5%;
Matches 7; Conservative
                                                                           Query Match
Best Local Similarity 87.5%;
Matches 7; Conservative
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238 ETWILRHP 245
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A, Cross-references: UMIPROT: P29984, UNIPARC:UP10000131DF8; GB:D10514; DDBJ:D01074; NID:g C; Superfamily: hepatitis C virus genome polyprotein
C; Superfamily: hepatitis C virus genome polyprotein
C; Superfamily: hepatitis C virus genome polyprotein
C; Superfamily: hepatitis C virus genome polyprotein
C; Superfamily: hepatitis C virus genome polyprotein
F; 1-49/Product: membrane-associated protein M (fragment) #status predicted < TMI)
F; 50-544/Product: envelope protein E #status predicted < SNV)
F; 526-542/Domain: transmembrane #status predicted < TMI)
F; 526-542/Domain: transmembrane #status predicted < TMI)
F; 526-555/Product: nonstructural protein NSI (fragment) #status predicted
F; 116, 202/Binding site: carbohydrate (Asn) (covalent) #status predicted
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Q.Opyprotein - dengue virus type 2

C.Species: dengue virus type 2

C.Species: dengue virus type 2

C.Date: 07-Apr-1994 #sequence_revision 07-Apr-1994 #text_change 31-Dec-2004

C.Date: 07-Apr-1994 #sequence_revision 07-Apr-1994 #text_change 31-Dec-2004

C.Speciesion: A6864

R.Ruiz, B.H.; Sanchez, I.; Ortega, G.J.; Lopez, I.; Ortiz-Ortiz, L.

Submitted to GenBank, October 1992

S.A.Beacription: Nucleotide sequence and deduced amino-acid sequence of the structural pro
A;Reference number: A48644
                                                                                                                                                                                                                                                                       A;Molecule type: mRNA
Kaeidues: 1-166 <SHI->
A;Cross-references: UNIPROT:Q66346; UNIPARC:UP10000F6DD9; EMBL:X72849; NID:g437772; PID
C;Superfamily: hepatitis C virus genome polyprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   genome polyprotein - dengue virus type 2 (strain TH-36) (fragment)
N;Contains: envelope protein E; membrane-associated protein M; nonstructural protein NS1
C;Species: dengue virus type 2
C;Species: dengue virus type 2
C;Accession: JQ1404
R;Shiu, S.Y.W.; Jiang, W.R.; Porterfield, J.S.; Gould, E.A.
J. Gen. Virol. 73, 207-212, 1992
A;Title: Envelope protein sequences of dengue virus isolates TH-36 and TH-Sman, and iden
A;Reference number: JQ1404; MUID:92113574; PMID:1339466
A;Accession: JQ1404
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                 premembrane protein - dengue virus type 2
C;Species: dengue virus type 2
C;Species: dengue virus type 2
C;Adzes G-Jan-1995 #sequence_revision 06-Jan-1995 #text_change 31-Dec-2004
C;Accession: S40144
R;Shiu, S.Y.W.
Submitted to the EMBL Data Library, May 1993
A;Reference number: S40144
A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                               Length 166;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                               Score 45; DB 2;
Pred. No. 1.3;
0; Mismatches
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Best Local Similarity 87.5
Tr. Conservative
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A; Residues: 1-555 <SHI>
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les 7; Conserv
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Best Local
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A,Molecule type: genomic RNA
A,Rosidues: 1-775 <RUI>
A,Cross-references: UNIPROT:Q66398; UNIPARC;UPI00000EEE45; GB:L04561; NID:g323652; PIDN:J
C,Superfamily: hepatitis C virus genome polyprotein
C;Keywords: polyprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     genome polyprotein - dengue virus type 2 (strain D2-04) (fragment)
N;Contains: capsid protein C; envelope protein E; membrane-associated protein M; nonstruc
C;Speciesi dengue virus type 2
C;Date: 31-Dec-1992 #sequence_revision 31-Dec-1992 #text_change 31-Dec-2004
C;Accession: JC1007; JC1005
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A,Residues: 776-1127 < YA2>
A,Ross-references: UNIPARC: UD1000174A07
A,Residues: 776-1127 < YA2>
A,Ross-references: UNIPARC: UD10000174A07
A,Ross-references: UNIPARC: UD10000174A07
A,Note: the authors translated the codons GTG for residue 899 as Leu, CTG for residue 95;
C,Superfamily: hepatitis C virus genome polyprotein
C,Reywords: capsid protein C #status predicted < CAP>
F;1-114/Product: capsid protein C #status predicted < CAP>
F;115-280/Product: membrane-associated protein M precursor #status predicted < MEM>
F;115-280/Product: membrane-associated protein M #status predicted < MEM>
F;26-280/Product: membrane-associated protein M #status predicted < MEM>
F;27-743/Domain: transmembrane #status predicted < TM2>
F;72-743/Domain: transmembrane #status predicted < TM3>
F;77-743/Domain: transmembrane #status predicted < TM3>
F;77-743/Domain: transmembrane #status predicted < TM3>
F;77-743/Domain: transmembrane #status predicted < TM3>
F;77-743/Domain: transmembrane #status predicted < TM3>
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F;77-743/Domain: transmembrane #status predicted < TM3>
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F;77-743/Domain: transmembrane #status predicted < TM3>
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N;Contains: capsid protein; envelope protein; membrane protein; nonstructural protein NS:
a; nonstructural protein NS4b; nonstructural protein NS5
C;Species: dengue virus type 2
C;Date: 30-Jun-1989 #sequence_revision 30-Jun-1989 #text_change 31-Dec-2004
C;Accession: A22972
R;Hahn, Y.S.; Galler, R.; Hunkapiller, T.; Dalrymple, J.M.; Strauss, J.H.; Strauss, E.G.
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A; Residues: 1-775 < YANA
A; Cross-references: UNIPROT: P30026; UNIPPARC: UPI0000174A06
A; Note: the authors translated the codons TTA for residue 53 as Phe, AGT for residue 136
5 as Arg, GGC for residue 266 as Ala, and CAG for residue 272 as Leu
R; Yan, P.Y.; Kautner, I.M.; Koh, C.L.; Lam, S.K.
Chinese J. Microbiol. Immunol. 11, 9-12, 1991
A; Title: Mucleotide and encoded amino acid sequences of the nonstructural protein NS1 ger
A; Reference number: JC1005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C;Accession: JC1007; JC1005
R;Yang, P.Y.; Lam, S.K.
Chinese J. Microbiol. Immunol. 11, 341-344, 1991
A;Title: The nucleotide and encoded amino acid sequences of the structural protein gene A;Reference number: JC1007
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Pred. No. 8.7;
0; Mismatches
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Pred. No. 6;
0; Mismatches
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Length 3391;

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Query Match
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Virology 162, 167-180, 1988

A;Title: Nuclectide sequence of dengue 2 RNA and comparison of the encoded proteins with A;Reference number: A29972; MUID:88101365; PMID:2827375

A;Accession: A29972; MUID:88101365; PMID:2827375

A;Accession: A29972; MUID:88101365; PMID:2827375

A;Rocession: A29972; MUID:88101365; PMID:2827375

A;Rocession: A29972; MUID:88101365; PMID:2827375

A;Rocession: A29972; MUID:88101365; PMID:2827375

A;Rocession: A29972; MUID:88101365; PMID:87273654; PIDN:AA42962.1; PID: C;Superfamily: hepatitis C virus genome polyprotein
C;Keywords: ATP; capabid protein; envelope protein; predicted <ARP>
F;115-280/Product: membrane protein #status predicted <ARP>
F;115-280/Product: membrane protein #status predicted <ARP>
F;116-280/Product: monstructural protein NS21 #status predicted <NS1>
F;1189-1145/Product: nonstructural protein NS22 #status predicted <NS1>
F;1189-1145/Product: nonstructural protein NS2 #status predicted <NS2>
F;146-1475/Product: nonstructural protein NS2 #status predicted <NS3>
F;146-1475/Product: nonstructural protein NS2 #status predicted <NS3>
F;146-1475/Product: nonstructural protein NS2 #status predicted <NS3>
F;1668-1675/Region: nucleotide-binding motif A (P-loop)
F;175-1760/Region: public Protein NS2 #status predicted <NS3>
F;175-1760/Region: nucleotide-binding motif A (P-loop)
F;175-1760/Region: public Protein NS2 #status predicted <NS3>
F;175-1760/Product: nonstructural protein NS2 #status predicted <NS3>
F;175-1760/Region: nucleotide-binding motif A (P-loop)
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;2377-2488/Product: nonstructural protein NS4b #status predicted <N4B>
;2489-3388/Product: nonstructural protein NS5 #status predicted <NS5>
;183,347,433,905,982,1134,1174,1329,1369,2298,2302,2384,2454,2482,2641,2662,2701,2711/E
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A; Residues: 1-331 (BLO)
A; Cross-references: UNIPROT:P29990; UNIPARC:UPI0000131DF5; GB:M84727; GB:M85259; NID:g32
C; Superfamily: hepatitis C virus genome polyprotein;
C; Keywords: ATP; capsid protein; envelope protein; glycoprotein; nonstructural protein;
F; 1-114, Product: capsid protein C #status predicted <CPC>
F; 1-114, Product: capsid protein C #status predicted cMPP>
F; 115-280/Product: membrane-associated protein M precursor #status predicted cMPP>
F; 115-205/Domain: nonterminal signal sequence #status predicted <NFM>
F; 206-280/Product: membrane-associated protein M #status predicted cMPM>
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N;Contains: capsid protein C; envelope protein E; membrane-associated protein M; nonstru
tural protein NS4a; nonstructural protein NS4b; nonstructural protein NS5
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C;Accession: 31-Dec-1992 #sequence revision 31-Dec-1992 #text_change 31-Dec-2004
C;Accession: A4.4451; A4.3496; A4.3763
R;Blok, J.; McWilliam, S.M.; Butler, H.C.; Gibbs, A.J.; Weiller, G.; Herring, B.L.; Hems V;Cology 187, 573-590, 1992
A;Title: Comparison of a dengue-2 virus and its candidate vaccine derivative: sequence x A;Reference number: A4.8451; MUID:92188532; PMID:1313269
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F;2244-2491/Product: nonstructural protein NS4b #status predicted <N4B>
F;2492-3391/Product: nonstructural protein NS5 #status predicted <NS5>
F;183,347,433/Binding site: carbohydrate (Asn) (covalent) #status predicted
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F;281-775/Product: envelope protein E #status predicted <EBE>
F;221-743/Domain: transmembrane #status predicted <TM2>
F;727-773/Domain: transmembrane #status predicted <TM3>
F;757-773/Domain: transmembrane #status predicted <TM3>
F;757-1127/Product: nonstructural protein NS1 #status predicted <NS1>
F;1128-1345/Product: nonstructural protein NS2 #status predicted <NSA>
F;1474/Product: nonstructural protein NS2 #status predicted <NS2>
F;1468-1675/Region: nucleotide-binding motif A (P-loop)
F;1755-1760/Region: nucleotide-binding motif B
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genome polyprotein - dengue virus type 2 (strain 16681-PDK53)
N;Contains: capsid protein C; envelope protein E; membrane-associated protein M; nonstructural protein N844, nonstructural protein N85
C;Species: dengue virus type 2
C;Date: 31-Dec-1992 #sequence_revision 31-Dec-1992 #text_change 31-Dec-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         irology 187, 573-590, 1992
Title: Comparison of a dengue-2 virus and its candidate vaccine derivative: sequence r
Reference number: A42451; MVID:92188532; PMID:1312269
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F;183,347,433,905,982,1134,1174,1329,2301,2305,2346,2387,2457,2485,2644,2665,2704,2714/B
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.06-280/Product: membrane-associated protein M #status predicted <MPM>
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7.281-775/Product: envelope protein E #status predicted <FR5-
7.727-743/Domain: transmembrane #status predicted <TM4-
7.757-773/Domain: transmembrane #status predicted <TM5-
7.776-1127/Product: nonstructural protein NS1 #status predicted <NS1-
7.1128-1134/Product: nonstructural protein NS2a #status predicted <NS2-
7.1128-1134/Product: nonstructural protein NS2a #status predicted <NM3-
7.125-1288/Domain: transmembrane #status predicted <TM6-
7.127-1288/Domain: transmembrane #status predicted <TM7-
7.135-1367/Domain: transmembrane #status predicted <TM9-
7.135-1367/Domain: transmembrane #status predicted <TM9-
7.136-1484/Domain: transmembrane #status predicted <TM9-
7.148-1464/Domain: transmembrane #status predicted <TM8-
7.1448-1464/Domain: transmembrane #status predicted <TM8-
7.1448-1464/Domain: transmembrane #status predicted <TM8-
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Blok, J.; McMilliam, S.M.; Butler, H.C.; Gibbs, A.J.; Weiller,
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Pred. No. 26;
0; Mismatches 1; Indels
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                                12148-2164/Domain: transmembrane #status predicted <TWC>-2174-2190/Domain: transmembrane #status predicted <TWD>-22131/Domain: transmembrane #status predicted <TWD>-1227-2213/Domain: transmembrane #status predicted <TWF>-1227-2243/Domain: transmembrane #status predicted <TWF>-1227-2243/Domain: transmembrane #status predicted <TWF>-1227-2243/Domain: transmembrane #status predicted <TWF>-1227-2243/Domain: transmembrane #status predicted <TWF>-1227-2243/Domain: transmembrane #status predicted <TWF>-1227-2243/Domain: transmembrane #status predicted <TWF>-1227-2243/Domain: transmembrane #status predicted <TWF>-1227-2243/Domain: transmembrane #status predicted <TWF>-1227-2243/Domain: transmembrane #status predicted <TWF>-1227-2243/Domain: transmembrane #status predicted <TWF>-1227-2243/Domain: transmembrane #status predicted <TWF>-1227-2243/Domain: transmembrane #status predicted <TWF>-1227-2243/Domain: transmembrane #status predicted <TWF>-1227-2243/Domain: 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Score 45; DB 1;
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Best Local Similarity 87.5.
France 7; Conservative
                                                                                    Best Local Similarity 87.5
Matches 7; Conservative
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A; Residues: 1-3391 <BLO>
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genome polyprotein - dengue virus type 2 (strain Jamaica)

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238 ETWILRHP 245
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polyprotein - dengue virus type 2 (strain New Guinea-C)
polyprotein capsid protein; envelope protein; membrane glycoprotein; nonstructural protein NS44, nonstructural protein NS44, nonstructural protein NS45, nonstructural protein NS44, nonstructural protein NS44, nonstructural protein NS46, nonstructural protein NS46, nonstructural protein NS46, nonstructural protein NS46, nonstructural protein NS46, nonstructural protein NS46, nonstructural protein NS46, nonstructural protein NS46, nonstructural protein NS56, 197-211, 1989
C,Accession: JS0219; A28646
R;Irie, K.; Mohan, P.M.; Sasaguri, Y.; Putnak, R.; Padmanabhan, R.
Gene 75, 197-211, 1989
A;Title: Sequence analysis of cloned dengue virus type 2 genome (New Guinea-C strain).
A;Accession: JS0219
A;Molecule type: genomic RNA
A;Residues: J-3391 cIRI>
A;Accession: JS0219
A;Molecule type: genomic RNA
A;Residues: J-3391 cIRI>
A;Cross-references: UNIPROT: 09WDA7; UNIPROT: 09WDA6; UNIPROT: 09J8B94; UNIPROT: 09J8B95; UNIPROT: 09J8B95; UNIPROT: 09J8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT: 09L8B95; UNIPROT:
Nicontains: capsid protein C; envelope protein E; membrane-associated protein M; nonstrutural protein NS4b; nonstructural protein NS4b; nonstructural protein NS5 C;Species: dengue virus type 2 C;Date: 30-Sep-1989 #sequence_revision 30-Sep-1989 #text_change 31-Dec-2004 C;Accession: A94346; A94378; A25613; A259199 B; Ebubel, V; Kinney, R.M.; Trent, D.W. Virology 155, 36-377, 1986
A;Title: Nucleotide sequence and deduced amino acid sequence of the structural proteins A;Reference number: A94346; MUID:87071658; PMID:3024394
A;Reference number: A94346; MUID:87071658; PMID:3024394
A;Residues: 1-791 < ADEL>
A;Cross-references: UNIPROT: P07564; UNIPARC: UPI00001710BB; GB:M15975
A;Cross-references: UNIPROT: P07564; UNIPARC: UPI0001710BB; GB:M15975
A;Cross-references: UNIPROT: P07564; UNIPARC: UPI0001710BB; GB:M15975
A;Cross-reference and deduced amino acid sequence of the nonstructural protein A;A;Reference number: A94378; MUID:8825654; PMID:3388770
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A/Recession: A94378
A/Recession: A94378
A/Recession: A94378
A/Recession: A94378
A/Residues: 792-3391 - CDE2>
A/Cross-references: UNIPARC: UP10000174A05; GB:W20558
A/Cross-references: UNIPARC: UP10000174A05; GB:W20558
C/Superfamily: hepatitis C virus genome polyprotein
C/Reywords: AFP; cappsid protein; envelope protein; glycoprotein; nonstructural protein;
C/Reywords: AFP; cappsid protein C #status predicted <PR>
F/3-114/Product: capsid protein C #status predicted <PR>
F/3-117/Domain: transmembrane #status predicted <PR>
F/115-280/Product: membrane-associated protein M #status predicted <MPM>
F/206-280/Product: membrane-associated protein M #status predicted <MPM>
F/280-284/Domain: transmembrane #status predicted <PR>
F/21-775/Product: envelope protein E #status predicted <PR>
F/21-775/Product: envelope protein E #status predicted <PR>
F/112-1741/Product: nonstructural protein NS1 #status predicted <NS1>
F/112-1744/Product: nonstructural protein NS2 #status predicted <NS2>
F/112-1747-Caluty | nonstructural protein NS3 #status predicted <NS3>
F/168-167/Region: nucleotide-binding motif A (P-loop)
F/176-176/Product: nonstructural protein NS3 #status predicted <NS3>
F/168-167/Region: nucleotide-binding motif B (P-loop)
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F;2094-2243/Product: nonstructural protein NS4a #status predicted <N4A>
F;2244-2491/Product: nonstructural protein NS4b #status predicted <N4B>
F;2249-3391/Product: nonstructural protein NS5 #status predicted <NS5>
F;2492-3391/Product: nonstructural protein NS5 #status predicted <NS5>
F;183,347,433/Binding site: carbohydrate (Asn) (covalent) #status predicted
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87.5%; Pred. No. 26;
iive 0; Mismatches 1; Indels
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tes 7; Conservative
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Virology 163, 93-103, 1988
A;Title: Functional and antigenic domains of the dengue-2 virus nonstructural glycoprotei
A;Reference number: A28646; MUID:88160069; PMID:2964755
                                                                                                                                                                                                               A; Molecule type: genomic RNA
A; Residues: 749-1227 < PUT>
A; Residues: 749-1227 < PUT>
A; Residues: 749-1227 < PUT>
A; Residues: 749-1227 < PUT>
A; Residues: 749-1227 < PUT>
A; Residues: 749-1227 < PUT>
A; Residues: 749-1227 < PUT>
A; Residues: 749-1227 < PUT>
A; Residues: 749-1227 < PUT>
C; Reywords: ATP; envelope protein; glycoprotein; monstructural protein; mucleotide bindir
F; 2-114/Product: capsid protein #status predicted < REM>
F; 115-280/Product: membrane glycoprotein #status predicted < REM>
F; 115-280/Product: membrane glycoprotein #status predicted < REM>
F; 206-280/Product: membrane glycoprotein #status predicted < REM>
F; 28-775/Product: envelope protein #status experimental < RNV>
F; 128-137/Product: nonstructural protein NS2A #status predicted < NS2>
F; 1128-1345/Product: nonstructural protein NS2A #status predicted < NS2>
F; 1159-1173/Domain: transmembrane #status predicted < TM3>
F; 1159-1175/Product: nonstructural protein NS2B #status predicted < NS3>
F; 1476-2093/Product: nonstructural protein NS3B #status experimental < NS3>
F; 168-1675/Region: nucleotide-binding motif A (P-loop)
F; 1755-1760/Region: nucleotide-binding motif A (P-loop)
F; 1755-1760/Region: nucleotide-binding motif A (P-loop)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 F;2094-2379/Product: nonstructural protein NS4A #status predicted <NS4>
F;2080-2491/Product: nonstructural protein NS4B #status predicted <N4B>
F;2492-3391/Product: nonstructural protein NS5 #status experimental <NS5>
F;1892-3391/Product: nonstructural protein NS5 #status experimental <NS5>
F;1839, 965, 962, 2305, 2457, 2704/Binding site: carbohydrate (Ann) (covalent) #stat
F;347, 433, 1134, 1174, 2301, 2485, 2665, 2714/Binding site: carbohydrate (Ann) (covalent) #stat
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N;Contains: envelope protein E; membrane-associated protein M; nonstructural protein NSI
C;Species: dengue virus type 1
C;Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 31-Dec-2004
C;Accession: J01405
R;Shiu, S.Y.W.; Jiang, W.R.; Porterfield, J.S.; Gould, E.A.
J. 207-212, 1992
A;Title: Envelope protein sequences of dengue virus isolates TH-36 and TH-Sman, and ident A;Reference number: J01404; MUID:92113574; PMID:1339466
A;Accession: J01405
A;Molecule type: genomic RNA
A;Residues: 1-555 <SHI>A;Molecule type: genomic RNA
A;Residues: 1-555 <SHI>A;Molecule type: genomic RNA
A;Residues: 1-550 <SHI
A;Molecule type: genomic RNA
A;Residues: 1-550 <SHI
A;Molecule type: genomic RNA
A;Residues: 1-550 <SHI
A;Molecule type: genomic RNA
A;Residues: 1-550 <SHI
A;Molecule type: genomic RNA
A;Residues: 1-550 <SHI
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A;Residues: 1-550 <SHI
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A;Residues: 1-550 <SHI
A;Molecule type: genomic RNA
A;Residues: 1-550 <SHI
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A;Residues: 1-550 <SHI
A;Molecule type: genomic RNA
A;Residues: 1-550 <SHI
A;Molecule type: genomic RNA
A;Residues: 1-550 <SHI
A;Molecule type: genomic RNA
A;Reference genomic RNA
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Pred. No. 26;
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Pred. No. 9.5;
0; Mismatches 1; Indels
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Best Local Similarity 87.5%;
Matches 7; Conservative
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Best Local Similarity 87.5%;
Matches 7; Conservative
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N;Contains: capsid protein C; envelope protein E; membrane-associated protein M; nonstruc
C;Species: dengue virus type 1
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C;Superfamily: hepatitis C virus genome polyprotein
C;Superfamily: hepatitis C virus genome polyprotein
C;Superfamily: hepatitis C virus genome polyprotein
C;Superfamily: hepatitis C virus genome polyprotein
C;Superfamily: acapsid protein; envelope protein; glycoprotein; nonstructural protein; polypi
F;1114/Product: capsid protein C #status predicted <PGP>
F;16-67/Domain: transmembrane #status predicted <PM>
F;102-118/Domain: transmembrane #status predicted <PM>
F;115-205/Domain: nonterminal signal sequence #status predicted <MP>
F;115-205/Domain: nonterminal signal sequence #status predicted <PM>
F;115-205/Domain: transmembrane #status predicted <PM>
F;266-280/Product: membrane #status predicted <PM>
F;266-280/Domain: transmembrane #status predicted <PM>
F;265-281/Domain: transmembrane #status predicted <PM>
F;715-735/Domain: transmembrane #status predicted <PM>
F;715-735/Domain: transmembrane #status predicted <PM>
F;756-732/Product: nonstructural protein NSI (fragment) #status predicted
F;756-732/Product: nonstructural protein NSI (fragment) #status predicted
F;183,347,433/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                     C;Accession: B32401
R;Chu, M.C.; O'Rourke, E.J.; Trent, D.W.
J. Gen. Virol. 70, 1701-1712, 1989
A;Title: Genetic relatedness among structural protein genes of dengue 1 virus strains.
A;Reference number: A32401; MUID:89293078; PMID:2738579
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C;Accession: A32401
R;Chu, M.C.; O'Rourke, E.J.; Trent, D.W.
J. Gen. Wirol. 70, 1701-1712, 1989
A;Title: Genetic relatedness among structural protein genes of dengue 1 virus strains.
A;Reference number: A32401; MUID:89293078; PMID:2738579
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F;775-773/Domain: transmembrane #status predicted <TM6>
F;776-792/Product: nonstructural protein NS1 (fragment) #status predicted <NS1>
F;776-792/Product: nonstructural protein NS1 (fragment) #status predicted
                            C;Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 31-Dec-2004
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13;
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Pred. No. 13;
0; Mismatches
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Pred. No. 13;
0; Mismatches
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87.5%;
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Best Local Similarity 87.5%;
Matches 7; Conservative
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Best Local (
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A; Residues: 1-792 cCHU>
A; Residues: 1-792 cCHU>
A; Residues: 1-792 cCHU>
A; Residues: 1-792 cCHU>
A; Cross-references: UNIPARC:UP1000017854F; GB:D00501
C; Superfamily: hepatitis C virus genome polyprotein
C; Superfamily: hepatitis C virus genome polyprotein
C; Keywords: capsid protein; envelope protein; glycoprotein; nonstructural protein; polyg
F; 1-114/Product: capsid protein C #status predicted <CPC>
F; 46-67/Domain: transmembrane #status predicted <TML>
F; 102-118/Domain: nonterminal sequence #status predicted <MMP>
F; 115-280/Product: membrane-associated protein M #status predicted <MPN>
F; 206-280/Product: membrane-associated protein M #status predicted <MPN>
F; 24-263/Domain: transmembrane #status predicted <TMA>
F; 266-281/Domain: transmembrane #status predicted <TMA>
F; 261-375/Domain: transmembrane #status predicted <TMA>
F; 281-775/Product: envelope protein E #status predicted <TMA>
F; 25-773/Domain: transmembrane #status predicted <TMA>
F; 775-773/Domain: transmembrane #status predicted <TMA>
F; 775-773/Domain: transmembrane #status predicted <TMA>
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F; 775-773/Domain: transmembrane #status predicted <TMA>
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polyprotein(C, E, M, prM) - dengue virus type 1 (fragment)
C;paccies: dengue virus type 1
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Gande polyprotein - dengue virus type 1 (strain 836-1) (fragment)

Gande polyprotein - dengue virus type 1 (strain 836-1) (fragment)

N;Contains: capsid protein C; envelope protein E; membrane-associated protein M; nonstru
C;Specises: dengue virus type 1
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C;Accession: C32401
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N;Contains: capsid protein C; envelope protein E; membrane-associated protein M; nonstru
C;Species: dengue virus type 1
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A;Note: sequence extracted from NCBI backbone (NCBIN:136589, NCBIP:136590)
C;Superfamily: hepatitis C virus genome polyprotein
C;Keywords: polyprotein
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Pred. No. 13;
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Matches 7; Conservative
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C;Accession: S09223
R;Samuel, S.; Koh, C.L.; Pang, T.; Lam,
Nucleic Acids Res. 18, 1905, 1990
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Best Local Similarity 87.5%;
Matches 7; Conservative
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Best Local Similarity 87.5%;
Matches 7; Conservative
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RESULT 15

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GNOTE Albis: capsid protein C; envelope protein B; membrane-associated protein M, nonstru
C; Species: dengue virus type 1
C; Species: dengue virus type 1
C; Date: 31-Mar-1990 #sequence_revision 31-Mar-1990 #text_change 31-Dec-2004
C; Date: 31-Mar-1990 #sequence_revision 31-Mar-1990 #text_change 31-Dec-2004
C; Date: 31-Mar-1990 #sequence_revision 31-Mar-1990 #text_change 31-Dec-2004
R; Mason, P.W.; McABA P.C.; Mason, T.L.; Fournier, M.J.
R; Mason, P.W.; McABA P.C.; Mason, T.L.; Fournier, M.J.
A; Reference number: A27032
A; Molecule type: genomic RNA
A; Residues: 1-1256 *tMAS
A; Residues: 1-1256 *tMAS
A; Residues: 1-1256 *tMAS
A; Residues: UNIPROT.P1763; UNIPARC.UPI000131DF1; GB:M23027; NID:G511850; PIDN: C; Repwords: capsid protein, envelope protein; glycoprotein, nonstructural protein; nucle
F; 2-114/Product: capsid protein C #status predicted <CCC->F; 114. Froduct: capsid protein C #status predicted <CCC->F; 115-280/Pomain: transmembrane #status predicted <TM2->F; 115-280/Pomain: transmembrane #status predicted <TM3->F; 115-280/Pomain: transmembrane #status predicted <TM3->F; 126-280/Pomain: transmembrane #status predicted <TM3->F; 136-280/Pomain: transmembrane #status predicted <TM3->F; 136-280/Pomain: transmembrane #status predicted <TM3->F; 136-280/Pomain: transmembrane #status predicted <TM3->F; 136-280/Pomain: transmembrane #status predicted <TM3->F; 136-280/Pomain: transmembrane #status predicted <TM3->F; 137-743/Pomain: transmembrane #status predicted <TM3->F; 137-743/Pomain: transmembrane #status predicted <TM3->F; 137-743/Pomain: transmembrane #status predicted <TM3->F; 138-1326/Product: nonstructural protein NS2a (fragament) #status predicted
F; 138-336-280/Product: nonstructural protein NS2a (fragament) #status predicted
F; 138-336-280/Product: nonstructural protein NS2a (fragament) #status predicted
F; 138-337, 433, 905, 982, 1190/Binding site: carbohydrate (ABB) (covalent) #status predicted
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A; Residues: 1-3390 <0SA>
A; Residues: 1-3390 <0SA>
A; Residues: 1-3390 <0SA>
A; Cross-references: UNIPROT: P27915; UNIPARC: UPI0000131DFE; GB:M93130; NID:g323468; PIDN: C; Superfamily: hepatitis C virus genome polyprotein
C; Superfamily: hepatitis C virus genome polyprotein
C; Superfamily: hepatitis C virus genome polyprotein; glycoprotein; nonstructural protein;
C; Keywords: ATP; capsid protein #status predicted <CAP>
F; 1-114-Product: capsid protein #status predicted <AM>
F; 115-280/Product: membrane protein precursor #status predicted <MEP>
F; 115-280/Product: membrane protein #status predicted <MEP>
F; 126-280/Product: membrane protein #status predicted <AM>
F; 280-770/Domain: transmembrane #status predicted <AM>
F; 281-771/Domain: transmembrane #status predicted <AM>
F; 774-1184/Product: nonstructural protein NS1 #status predicted <NS1>
F; 1156-1175/Domain: transmembrane #status predicted <TMA>
F; 1185-1175/Domain: transmembrane #status predicted <TMA>
F; 1185-1175/Domain: transmembrane #status predicted <NS1>
F; 1185-1175/Domain: transmembrane #status predicted <NMA>
F; 1185-1175/Domain: transmembrane #status predicted <NMA>
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F; 1185-1175/Domain: transmembrane #status predicted <NMA>
F; 1185-1175/Domain: transmembrane #status p
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N;Contains: capaid protein, envelope protein; membrane protein; nonstructural protein NS4

C;Species: dengue virus type 3

C;Species: dengue virus type 3

C;Accession: A34774

R;Osatomi, K; Sumiyoshi, H.

Virology 176, 643-647, 1990

A;Reference number: A34774; MUID:90266483; PMID:2345967

A;Accession: A34774

A;Accession: A34774
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87.5%; Pred. No. 21;
1.ve 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        87.5%;
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Matches 7; Conservative
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GNWVD3
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F;1344-1473/Product: nonstructural protein NS2b #status predicted <NS2>
F;1474-2092/Product: nonstructural protein NS3 #status predicted <NS3>
F;167-1674/Region: nucleotide-binding motif A (P-loop)
F;1754-1759/Region: nucleotide-binding motif B F;1754-1759/Region: DEAH motif F;2093-2378/Product: nonstructural protein NS4a #status predicted <N4A>
F;2379-2490/Product: nonstructural protein NS4b #status predicted <N4B>
F;2491-3390/Product: nonstructural protein NS4b #status predicted <NS5>
F;2491-3390/Product: nonstructural protein NS4b #status predicted <NS5>
F;2491-3390/Product: nonstructural protein NS5 #status predicted <NS5>
F;2491-3390/Product: nonstructural protein NS5 #status predicted <NS5>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N;Contains: capsid protein; envelope protein; membrane protein; nonstructural protein NSJ a; nonstructural protein NS4b; nonstructural protein NS5 capsides dengue virus type 1
C;Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 31-Dec-2004 C;Accession: A42551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A,Accession: A42551
A,Molecule type: genomic RNA
A,Residues: 1-3396 ePudy
A,Residues: 1-3396 ePudy
A,Residues: 1-3396 ePudy
A,Residues: 1-3396 ePudy
A,Residues: 1-3396 ePudy
A,Residues: U3196 ePudy
C,Superfamily: hepatitis C virus genome polyprotein
C,Superfamily: hepatitis C virus genome polyprotein
C,Superfamily: hepatitis C virus genome polyprotein
C,Reywords: ATP: capsid protein; envelope protein; glycoprotein; nonstructural protein; F;1-14/Product: membrane protein precursor #status predicted <MEP>
F;115-281/Product: membrane protein #status predicted <MEP>
F;115-204/Domain: transmembrane #status predicted <MIM>
F;267-279/Domain: transmembrane #status predicted <MIM>
F;267-274/Product: envelope protein #status predicted <MIM>
F;267-274/Product: nonstructural protein NS1 #status predicted <NS1>
F;115-1127/Product: nonstructural protein NS2 #status predicted <NS2>
F;1147-2093/Product: nonstructural protein NS2 #status predicted <NS2>
F;1475-1093/Product: nonstructural protein NS3 #status predicted <NS2>
F;168-167/SRegion: nucleotide-binding motif A (P-loop)
F;175-1760/Region: nucleotide-binding motif A (P-loop)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          R;Fu, J.; Tan, B.H.; Yap, E.H.; Chan, Y.C.; Tan, Y.H.
Virology 188, 953-958, 1992
A;Title: Full-length cDNA sequence of dengue type 1 virus (Singapore strain S275/90)
A;Reference number: A42551; MUID:92263809; PMID:1585663
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F;2244-2492/Product: nonstructural protein NS4b #status predicted <N4B>
F;2493-3396/Product: nonstructural protein NS5 #status predicted <NS5>
F;183,347,433/Binding site: carbohydrate (Asn) (covalent) #status predicted
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C;Species: dengue virus type 2
C;Date: 12-Feb-1993 #sequence_revision 12-Feb-1993 #text_change 31-Dec-2004
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Pred. No. 57;
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Pred. No. 57;
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A;Residues: 1-166 <SAM>
A;Cross-references: UNIPROT:Q67422; UNIPARC:UPI00000F4214; EMBL:X51712; NID:g59307; PIDN C;Superfamily: hepatitis C virus genome polyprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cjaccession: E86085
R;Perna, N.T.; Plunkett III, G.; Burland, V.; Mau, B.; Glasner, J.D.; Rose, D.J.; Mayhew Riler, L.; Grotbeck, E.J.; Davis, N.W.; Lim, A.; Dimalanta, E.; Potamousis, K.; Apodaca, Nature 409, 529-533, 2001
A;Title: Genome sequence of enterohemorrhagic Escherichia coli O157:H7.
A;Reference number: A85480; MUID:21074935; PMID:11206551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Residues: 1-205 <STO>
A;Cross-references: UNIPROT:Q8X763; UNIPARC:UP100001659BC; GB:AE005174; NID:g12518859; P
A;Experimental source: strain 0157:H7, substrain EDL933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          hypothetical protein EC84873 [imported] - Escherichia coli (strain O157:H7, substrain RIN Cispecies: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: Bscherichia coli (species: B
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                                                                                                                                                                                                                                                                                                                                                           Risamuel, S.; Koh, C.L.; Pang, T.; Lam, S.K.
Nucleic Acids Res. 18, 1905, 1990
A;Ittle: Nucleotide and encoded amino acid sequences of the membrane protein precursor agic fever, dengue shock syndrome or dengue fever.
A;Reference number: S09223; MUID:90245599; PMID:2336374
                                                                                                                                                                                                                              C;Species: dengue virus type 2
C;Date: 12-Feb-1993 #sequence_revision 12-Feb-1993 #text_change 31-Dec-2004
C;Accession: S09224
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C;Date: 16-Feb-2001 #sequence_revision 16-Feb-2001 #text_change 09-Jul-2004
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C;Superfamily: Escherichia coli hypothetical 23.0K protein b3944
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                                                                                                                                                                                                              membrane protein - dengue virus type 2 (strain M2) (fragment)
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Pred. No. 9.3;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   71.4%;
ilarity 85.7%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C; Keywords: membrane protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Molecule type: genomic RNA
                        ETWFFRYP 73
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Matches 6; Conserv
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Best Local Similarity
Matches 6; Conserv
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A; Status: preliminary
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                        99
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A,Title: Nucleotide and encoded amino acid sequences of the membrane protein precursor a agic fever, dengue shock syndrome or dengue fever.
A,Reference number: 809223; MUD:90245599; PMID:2336374
A,Accession: 809223
A,Molecule type: genomic RNA
A,Residues: 1-166 < SAM>
A,Cross-references: UNIPROT:067423; UNIPARC:UPIO0000F3200; EMBL:X51713; NID:g59309; PIDN C;Superfamily: hepatitis C virus genome polyprotein
C;Reywords: membrane protein
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A;Status: preliminary
A;Molecule type: DAP
A;Molecule type: DAP
A;Molecule type: DAP
A;Molecule type: DAP
A;Cross-references: UNIPROT:Q9HXT5; UNIPARC:UPI00000C5ACD; GB:AE004789; GB:AE004091; NID
C;Genetics:
A;Gene: PA3706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Molecule type: genomic RNA
A;Residues: 1-166 <SAM>
A;Cross-treferences: UnIPROT:Q67421; UNIPARC:UPI0000EFFA4; EMBL:X51711; NID:g59305; PIDN
C;Superfamily: hepatitis C virus genome polyprotein
C;Keywords: membrane protein
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CiSpecies: Pseudomonas aeruginosa
CiSpecies: Pseudomonas aeruginosa
CiSpecies: Pseudomonas aeruginosa
CiSpecies: Pseudomonas aeruginosa
CiSpecies: Pseudomonas aeruginosa
CiSpecies: Description 15-Sep-2000 #text_change 09-Jul-2004
CiAccession: A83184
Ristover, C.K.; Pham, X.Q.; Erwin, A.L.; Mizoguchi, S.D.; Warrener, P.; Hickey, M.J.; Bradman, S.; Yuan, Y.; Brody, L.L.; Coulter, S.N.; Folger, K.R.; Kas, A.; Larbig, K.; Lim, J. Lory, S.; Olson, M.V.
J. Lory, S.; Olson, M.V.
A.; Dery, S.; Olson, M.D.; Decomplete genome sequence of Pseudomonas aeruginosa PA01, an opportunistic pathor A.R. Rieference number: A82950; MUID:20437337; PMID:10984043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C;Species: dengue virus type 2

C;Date: 12-Feb-1993 #sequence_revision 12-Feb-1993 #text_change 31-Dec-2004

C;Accession: 80925

R;Samuel, S; Koh, C.L.; Pang, T.; Lam, S.K.

Nucleic Acids Res. 18, 1905, 1990

A;Title: Nucleotide and encoded amino acid sequences of the membrane protein precursor agic fever, dengue shock syndrome or dengue fever.

A;Reference number: S09223; MUID:90245599; PMID:2336374
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                                                                                                                                                                                                                                                                                                                                                                                           Score 42; DB 2; Length 166;
Pred. No. 4.2;
1; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            73.2%; Score 41; DB 2; Length 422; 75.0%; Pred. No. 16; 1; Indels iive 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 2; Length 166;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 42; DB 2
Pred. No. 4.2;
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 75.0%;
Matches 6; Conservative
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ilarity 75.0%;
Conservative
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Best Local Similarity 75.0
Matches 6; Conservative
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124 DTWILRHP 131
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Best Local Similarity
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C;Keywords: envelope protein; glycoprotein; membrane protein; nonstructural protein; pol; P;1-91/Domain: signal sequence #status predicted <SIG> F;2-166/Product: membrane-associated protein M #status predicted <MGM> F;167-661/Product: membrane-protein E #status predicted <EPE> F;62-665/Product: nonstructural protein NS1 (fragment) #status predicted <NS1> F;62-665/Product: nonstructural protein NS1 (fragment) #status predicted <NS1> F;69,233,319/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A,Status: preliminary; translated from GB/EMBL/DDBJ
A,Molecule type: DNA
A,Residues: 1-205 **RES>
A,Residues: 1-205 **RES>
A,Residues: 1-205 **RES>
A,Residues: 1-205 **RES>
A,Residues: F.R.; Plunkett III, G.; Bloch, C.A.; Perna, N.T.; Burland, V.; Riley, M.; Coll
R,Blattner, F.R.; Plunkett III, G.; Bloch, C.A.; Perna, N.T.; Burland, V.; Riley, M.; Coll
A,Residue 277, 1453-1462, 1997
Science 277, 1453-1462, 1997
A,Fitle: The complete genome sequence of Escherichia coli K-12.
A,Fitle: The Complete Genome Sequence of Pscherichia coli K-12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A,Accession: C65201
A,Status: preliminary; nucleic acid sequence not shown; translation not shown
A,Molecule type: DNA
A,Rosicus: 1-205 <BLAT>
A,Residues: 1-205 <BLAT>
A,Cross-references: UNIPARC:UPI000013B429; CB:AE000468; GB:U00096; NID:g1790374; PIDN:AAC,A,Experimental source: strain K-12, substrain MG1655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C;Species: Escherichia coli
C;Date: 31-May-1996 #sequence_revision 31-May-1996 #text_change 09-Jul-2004
C;Accession: 141293
R;Murray, N. B.; Daniel, A.S.; Cowan, G.M.; Sharp, P.M.
Mol. Microbiol. 9, 133-143, 1993
A;Title: Conservation of motifs within the unusually variable polypeptide sequences of t)
A;Reference number: 141290; MUID:94018600; PMID:8412658
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C;Superfamily: type I site-specific deoxyribonuclease chain hsdM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                hypothetical 23.0K protein b3944 - Escherichia coli (strain K-12)
Nylternate names: hypothetical protein P205
C,Species: Escherichia coli
C,Date: 07-Jun.1996 #sequence_revision 07-Jun.1996 #text_change 09-Jul-2004
C,Date: 07-Jun.1996 #sequence_revision 07-Jun.1996 #text_change 09-Jul-2004
C,Accession: 178665; C65201
R,Blattner, F.R.; Burland, V.; Plunkett III, G.; Sofia, H.J.; Daniels, D.L.
Nucleic Acids Res. 21, 5408-5417, 1993
A,Title: Analysis of the Escherichia coli genome. IV. DNA sequence of the region from 89
A,Reference number: IS8303, MUID:94089392; PMID:8265357
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C;Superfamily: Escherichia coli hypothetical 23.0K protein b3944
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                                                                                                                                                                                                                        Score 39; DB 2; Length 665;
Pred. No. 55;
0; Mismatches 2; Indels
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Pred. No. 25;
0; Mismatches
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85.7%;
                                                                                                                                                                                                                               Query Match
Best Local Similarity 75.0%;
Matches 6; Conservative
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Best Local Similarity 85.7
Matches 6; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                 124 EIWILRHP 131
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                                                                                                                                                                                                                                                                                                                                                                 2 ETWFLRHP 9
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N;Contains: envelope protein E; membrane-associated protein M; nonstructural protein NS1
C;Specias: dengue virus type 2
C;Specias: dengue virus type 2
C;Accession: PS0043
E;Gruenberg, A.; Woo, W.S.; Biedrzycka, A.; Wright, P.J.
J. Gen. Virol. 69, 1391-1398, 1988
A;Title: Partial nucleotide sequence and deduced amino acid sequence of the structural E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Status: preliminary
A;Molecule type: DNA
A;Molecule type: DNA
A;Molecule type: DNA
A;Molecule type: DNA
A;Molecule type: DNA
A;Cross-references: 1-33 «KUR>
A;Cross-references: train 1021, megaplasmid pSymB
A;Experimental source: strain 1021, megaplasmid pSymB
A;Experimental source: strain 1021, megaplasmid pSymB
A;Calibert, F.; Finan, T.M.; Long, S.R.; Puhler, A.; Abola, P.; Ampe, F.; Barloy-Hubler, pela, D.; Gowie, A.; Davis, R.W.; Dreano, S.; Federspiel, N.A.; Fisher, R.F.;
L.; Hyman, R.W.; Jones, T.
A;Authors: Kahn, D.; Kahn, M.L.; Kalman, S.; Keating, D.H.; Kiss, E.; Komp, C.; Lelaure, Hebault, P.; Vandenbol, M.; Vorholter, F.J.; Weidner, S.; Wells, D.H.; Wong, K.; Yeh, K.A;Title: The composite genome of the legume symbiont Sinorhizoblum meliloti.
A;Reference number: A96039; MUID:21368234; PMID:11474104
A;Contents: annotation
             A;Molecule type: DNA
A;Residues: 1-205 <HAY-
A;Residues: 1-205 <HAY-
A;Residues: 1-205 <HAY-
A;Cross-references: UNIPROT: Q8X763; UNIPARC: UPI00000D0ABB; GB:BA000007; PIDN: BAB38296.1;
A;Experimental source: strain O157:H7, substrain RIMD 0509952
GGenetics:
A;Genetics:
A;Genetics: EC94873
C;Superfamily: Escherichia coli hypothetical 23.0K protein b3944
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A, Molecule type: mRNA
A, Residues: 1-665 < GRU>
A, Cross-references: UNIPROT: P18356; UNIPARC: UPI0000178550
C, Comment: The RNA sequence was obtained from the DDBJ, release 5.0.
C, Superfamily: hepatitis C virus genome polyprotein
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Pred. No. 17;
0; Mismatches 1; Indels
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A;Genome: plasmid
C;Superfamily: l-arabinose transport system permease araH
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Pred. No. 28;
1; Mismatches
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                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 85.7%;
Matches 6; Conservative
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Best Local Similarity 83.3.
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WFIRHP 29
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A; Status: preliminary
A; Status: preliminary
A; Molecule type: DNA
A; Molecule type: DNA
A; Molecule type: DNA
A; Molecule type: DNA
A; Molecule type: DNA
A; Cross-references: UNIPROT: Q92WT6; UNIPARC: UPI00000CB46E; GB: AL591985; PIDN: CAC48643.1;
A; Experimental source: strain 1021, megaplasmid pSymB
A; Experimental source: strain 1021, megaplasmid pSymB
A; Galibert, F:; Finan, T.M.; Long, S.R.; Puhler, A.; Abola, P.; Ampe, F.; Barloy-Hubler, pela, D.; Chain, P.; Cowie, A.; Davis, R.W.; Dreano, S.; Federspiel, N.A.; Fisher, R.F.;
L.; Hyman, R.W.; Jones, T.
Science 293, 668-672, 2001
A; Authors: Kahn, D.; Kahn, M.L.; Kalman, S.; Keating, D.H.; Kiss, E.; Komp, C.; Lelaure, hebault, P.; Vandenbol, M.; Vorholter, F.J.; Weidner, S.; Wells, D.H.; Wong, K.; Yeh, K. A; Title: The composite genome of the legume symbiont Sinorhizobium meliloti.
A; Reference number: A96039; MUID: 21368234; PMID: 11474104
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 66.1%;
75.0%;
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Best Local Similarity
Matches 6; Conserv
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                                                                                                                                                                                                                                                                                                                 probable protein kinase T9L24.36 [imported] - Arabidopsis thaliana
C;Species: Arabidopsis thaliana (mouse-ear cress)
C;Date: 02-Mar-2001 #sequence_revision 02-Mar-2001 #text_change 09-Jul-2004
C;Accession: B96761
R;Theologis, A.; Ecker, J.R.; Palm, C.J.; Federspiel, N.A.; Kaul, S.; White, O.; Alonso, Chin, C.W.; Chung, M.K.; Conn, L.; Conway, A.B.; Conway, A.R.; Creasy, T.H.; Dewar, K.; ansen, N.F.; Hughes, B.; Huizar, L.
Nature 408, 816-820, 2000
A;Authors: Hunter, J.L.; Johnson-Hopson, C.; Khan, S.; Khaykin, E.; Kim, C.C.A.; Li, J.H.; Li, Y.; Liu, X.; Liu, S., Liu, Z.A.; Luros, J.S.; Maiti, R.; Marziali, Rizzo, M.; Rooney, T.; Rowley, D.; Sakano, H.
A;Authors: Salzberg, S.L.; Schwartz, J.R.; Shinn, P.; Southwick, A.M.; Sun, H.; Tallon, ker, M.; Wu, D.; Yu, G.; Fraser, C.M.; Venter, J.C.; Davis, R.W.
A;Title: Sequence and analysis of Chromosome 1 of the plant Arabidopsis.
A;Accession: B96761
A;Status: preliminary
A;Accession: B96761
A;Accession: B96761
A;Accession: Byendallary
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85.7%; Pred. No. 1.40+102;
live 0; Mismatches 1; Indels
        Score 38; DB 2; Length 490;
Pred. No. 60;
1; Mismatches 3; Indels
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A; Map position: 1
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 Length 301;
                 2; Indels
DB 2;
55;
Score 37; DB 2
Pred. No. 55;
0; Mismatches
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phosphinothricin N-acetyltransferase (EC 2.3.1.-) - Streptomyces griseus
C;Species: Streptomyces griseus
C;Species: Streptomyces griseus
C;Species: O-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 09-Jul-2004
C;Accession: S49184
R;Marcos, A.T.; Diez, B.; Gutierrez, S.; Fernandez, F.J.; Oguiza, J.A.; Martin, J.F.
Bubmitted to the EMBL Data Library, June 1994
A;Description: Three genes hrdb, hrdb and hrdT of Streptomyces griseus IMRU 3570, encodi
A;Reference number: 849184
A;Accession: S49184
A;Status: preliminary
A;Accession: S49184
A;Residues: 1-194 <AMR.
A;Residues: 1-194 <AMR.
Cross-references: UNIPROT: O54225; UNIPARC: UPIO00012FDAS; EMBL: X79980; NID: G510451; PIE
C;Superfamily: phosphinothricin N-acetyltransferase

433 ETWFLAH 439

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3; Indels

Score 37; DB 1; Length 194; Pred. No. 35; 0; Mismatches 3; Indels

66.1**%**; 66.7**%**;

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RESULT 30 C95872

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GenCore version 5.1.5 Copyright (c) 1993 - 2006 Biocc	n search, using sw model	August 31, 2006, 11:33:43 ; Search (withou 59.893	DENGUE_SEROTYPE3 56 1 retwflrhp 9	BLOSUM62 Gapop 10.0 , Gapext 0.5	849598 seqs, 925015592 residues	s satisfying chosen parameters:	rth: 0 rth: 2000000000	Minimum Match 0% Maximum Match 100% Listing first 100 summaries	<pre>Uniprot_7.2:* uniprot_sprot:* uniprot_trembl:*</pre>	No. is the number of results predicted by greater than or equal to the score of the derived by analysis of the total score di	SUMMARIES		Length DB 1D	.9 4112 2 .4 120 2 .4 166 2	.4 166 2 .4 280 2	.4 280	.4 280 2 .4 555 1	.4 565	.4 661 2 .4 661 2	.4 661 2 .4 661 2	4 661 2	4 661 2	.4 661 2	.4 661 2 .4 661 2	.4 661 2	4 661 2	4 661 2	661 2	.4 661 2 Q5VI91 .4 661 2 Q5VI92
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EMBL; X05375; CAA28966.1; -; Genomic_RNA.
HSSP; Q88653; 10KE.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTRAIN=GUTat10.1;
Ghedin E., Blandin G., Bartholomeu D., Caler E., Haas B., Hannick I., Shallom J., Hou L., Djikeng A., Feldblyum T., Hostetler J., Johnson J., Jones K., Koo H.L., Larkin C., Pai G., Peterson J., Vahalak H.G., Salzberg S., Simpson A.J., Tallon L., Van Aken S., Wanless D., White O., Wortman J., Fraser C.M., El-Sayed N.M.A.; Submitted (APR-2005) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                            Trypanosoma brucei.
Eukaryota; Euglenozoa; Kinetoplastida; Trypanosomatidae; Trypanosoma.
NCBI_TaxID=5691;
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01-NOV-1996, integrated into UniProtKB/TrEMBL.

01-NOV-1996, sequence version 1.

01-NOV-1996, sequence version 1.

01-NOV-1996, sequence version 2.

01-NOV-1996, sequence version 2.

Genomic RNA for envelope protein E N-term. (Fragment).

Dengue virus type 2.

Norunges, seRNA positive-strand viruses, no DNA stage; Flaviviridae;

Flavivirus; Dengue virus group.
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R GO; GO:0030286; C:dynein complex; IEA.

GO; GO:001687; F:ATP binding; IEA.

R GO; GO:0016887; F:ATPase activity; IEA.

R GO; GO:001777; F:microtubule motor activity; IEA.

R GO; GO:0003777; F:microtubule-based movement; IEA.

R InterPro; IPRO11704; AAA. 5.

R InterPro; IPRO04273; Dynein-heavy.

R Fean; PF03028; Dynein, heavy; 1.

R EAG. R F0306070855EDAO CRC64;
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Wright P.J.;
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                                                                                             Q57VT8 9TRYP PRELIMINARY; PRT; 4112 AA. Q57VT8; 10-MAY-2005, integrated into UniProtKB/TrEMBL. 10-MAY-2005, sequence version 1. Dynein heavy chain, putative. Dynein heavy chain, putative. ORFNames=Tb927.7.920;
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STRAIN=New Guinea C;
MEDLINE=87197230; PubMed=2952760;
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Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 80.4%; Score 45; DB 2; Length 120; Best Local Similarity 87.5%; Pred. No. 6.2; Matches 7; Conservative 0; Mismatches 1; Indels
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Submitted (MAY-1993) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                    120 120 120 120 MW; FF86913787CA5C27 CRC64;
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GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
InterPro; IPR011999; Flav_glyE_cen_dm.
InterPro; IPR011999; VI_glyE_cen_dm.
InterPro; IPR011998; VI_glyE_cen_din.
Pfam; PF008089; Plavi_M; I.
Pfam; PF01004; Flavi_M; I.
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PIR; S40144; S40144.
GO; GO:0019058; C:viral capsid; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
InterPro; IPR00069; Flavi_M.
InterPro; IPR000535; Plavi_Dropep.
PF01004; Plavi M; 1.
PF01570; Flavi_Dropep; 1.
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Q66346;
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EMBL; AF360863; AAL76291.1; -; Genomic_RNA.
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Q8QZ65;
                                                                                                                     Polyprotein.
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SEQUENCE 28
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NON TER 21
SEQUENCE 28
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                                                                                                                                                 Yang P.Y., Kautner I., Koh C.L., Lam S.K.; "Nucleotide and deduced amino acid sequences of genes encoding the structural and nonstructural NSI proteins of a dengue-2 virus isolated
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Holmes B.C., Gould B.A.,
"Molecular epidemiology of dengue type 2 virus in Venezuela: evidence
for in situ virus evolution and recombination.";
J. Gen. Virol. 82:2945-2953(2001).
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01-370-2002, integrated into UniProtKB/TrEMBL.
01-JUN-2002, sequence version 1.
07-FBB-2006, entry version 9.
Polyprotein (Fragment).
Polyprotein (Fragment).
Viruses: SRRNA positive-strand viruses, no DNA stage; Flaviviridae; Flavivirus group.
                              01-NOV-1996, sequence version 1.
07-FEB-2006, entry version 19.
Membrane protein (Fragment).
Dengue virus type 2.
Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
NCBI_TaxID=11060;
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InterPro; IPR002535; Flavi.propep.
Pfam; PF01004; Flavi.m; 1.
Pfam; PF01570; Flavi.propep; 1.
CHAIN 92 >166 membrane protein precursor.
                                                                                                                                                                                                                                               Submitted (NOV-1991) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                              166 AA; 18790 MW; 07E1FC1EBB7D4521 CRC64;
                    01-NOV-1996, integrated into UniProtKB/TrEMBL
                                                                                                                                                                                                                                                                                                    EMBL; X65242; CAA46343.1; -; Genomic RNA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
  166 AA.
PRT;
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 PRELIMINARY;
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Best Local Similarity 87.5
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NUCLEOTIDE SEQUENCE
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Q66357_9FLAV
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MEDILINE=215714610; DubMed=11714970;
MEDILINE=215714610; DubMed=11714970;
Uzcategui N.Y., Camacho D., Comach G., Cuello de Uzcategui R.,
Holmes E.C., Gould E.A.;
"Molecular epidemiology of dengue type 2 virus in Venezuela: evidence for in situ virus evolution and recombination.";
J. Gen. Virol. 82:2945-2953 (2001).
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Flavivirus; Dengue virus group.
NCBI_TaxID=11060;
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                                                                                                                                                                                                                                                                                                                                                                        280 AA; 31847 MW; E889FDD11929CBA7 CRC64;
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SMR; Q80265; 21-100.
GO; GO:0019928; Crviral capsid; IEA.
GO; GO:0005198; F:structural molecule activity; IEA.
GO; GO:001908; F:structural infectious cycle; IEA.
InterPro; IPR001122; Flavi, capsidC.
InterPro; IPR000069; Flavi_M.
InterPro; IPR000059; Flavi_M.
Flavi_Pro; IPR00135; Flavi_m.
Flavi_Pro; IPR0103; Flavi_M.
Flavi_M. PF01004; Flavi_M; I.
SME, 080264; 21-100.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0005199; F:structural molecule activity;
GO; GO:0019058; F:structural infectious cycle; IEA.
InterPro; IPR001122; Flavi capsidc.
InterPro; IPR002059; Flavi propep.
Fam; PP01003; Flavi capsid; I.
Fam; PP01004; Flavi M; 1.
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P29984;
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                                                                               01-JUN-2002, sequence version 1.
07-FEB-2006, entry version 9.
Polyprotein (Fragment).
Dengue virus type 2.
Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae; Flavivirus; Dengue virus group.
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Virubes; BRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
VCBI_TaxID=11060;
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SMR, Q8QZ66; 21-100.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019028; F:setructural molecule activity; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
InterPro; IPR001122; Flavi_capsidC.
InterPro; IPR000122; Flavi_m.
InterPro; IPR00059; Flavi_m.
Ffam; PF01003; Flavi_m.
Pfam; PF01004; Flavi_m. 1.
Pfam; PF01570; Flavi_m.1.
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                                                             01-JUN-2002, integrated into UniProtKB/TrEMBL
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QBQZ67;
                  PRELIMINARY; PRT;
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nes 7; Conservative
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                                                                                                                                                                                                                                                             NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                  NCBI_TaxID=11060;
                  Q8QZ66_9FLAV
Q8QZ66;
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MEDLINE=9213574. PubMed=1339465;

A Shiu S.Y.W. Jiang W.R. Porterfield J.S., Gould E.A.;
Shiu S.Y.W. Jiang W.R. Porterfield J.S., Gould E.A.;
The sequence of dengue virus isolates TH-36 and TH-36 and identification of a type-specific genetic marker for dengue virus and identification of a type-specific genetic marker for dengue to the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of t
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-APR-1993, integrated into UniProtKB/Swiss-Prot.
01-APR-1993, sequence version 1.
07-MAR-2006, entry version 43.
Genome polyprotein [Contains: Envelope protein M (Matrix protein);
Major envelope protein E; Nonstructural protein I (NS1)] (Fragment).
Dengue virus type 2 (strain TH-36).
Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus, 10-ngue virus group.
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RISP, 001404; JQ1404.

RISP, 001404; JQ1404.

RISP, 0018653; IOXE.

RICEPPO; IPRO11999; Flav glyE_cen_dm.

RICEPPO; IPRO00069; Flav, M.

RICEPPO; IPRO00069; Flav, M.

RICEPPO; IPRO11998; Vrl_glyE_cen_dim.

R Pfam; PF02812; Flavi_glycop_C; 1.

R Pfam; PF01004; Flavi_glycop_C; 1.

R Pfam; PF01004; Flavi_m, 1.

R Capsid protein; Core_protein; Envelope protein; Glycoprotein;
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87.5%; Pred. No. 14;
iive 0; Mismatches 1; Indels
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Envelope protein M.
/FTIG=PRO_0000037922.
/FTIG=PRO_000037923.
/FTIG=PRO_000037923.
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31893 MW; 814A8B9B4A22AC20 CRC64;
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0005198; F:structural molecule activity; IEA.
GO; GO:001908; P:structural infectious cycle; IEA.
InterPro; IER001122; Flavi capsidC.
InterPro; IER00122; Flavi m.
InterPro; IER002535; Flavi propep.
Pfam; PP01003; Flavi capsid; 1.
Pfam; PP01004; Flavi capsid; 1.
Pfam; PP01570; Flavi propep; 1.
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Best Local Similarity 87.5
Matches 7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STANDARD;
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SEQÜENCE 280
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Distributed under the Creative Commons Attribution-NoDerivs License
                                                                                                                                                                                                                                                                                                                      Dengue virus type 2.
Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
NCBI_TaxID=11060;
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Viruses; ssRNA positive-strand viruses, no DNA stage, Flaviviridae;
Flavivirus; Dengue virus group.
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87.5%; Pred. No. 29;
tive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                      NUCLEOTIDE SEQUENCE.
STRAIN=TOTRES Strait 1;
Serafin I.L., Phillips D.A.;
Submitted (MAY-1997) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SME; 012290; 48-441.

GO; GO:0016021; C:integral to membrane; IEA.

GO; GO:0019031; C:viral capsid; IEA.

GO; GO:0019031; C:viral envelope; IEA.

GO; GO:001918; F:structural molecule activity; IEA.

GO; GO:001968; F:structural molecule activity; IEA.

GO; GO:001968; F:structural molecule activity; IEA.

InterPro; IPR001059; Flav, glyE_cen_dm.

InterPro; IPR001057; Flav, INS.

InterPro; IPR001157; Flav, INS.

InterPro; IPR001159; V:II_glyE_Ig-like.

InterPro; IPR011999; V:II_glyE_cen_dim.
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nonstructural protein 1.
                                                                                                                                                                                                                            01-JUL-1997, integrated into UniProtKB/TrEMBL.
01-JUL-1997, sequence version 1.
07-FEB-2006, entry version 26.
Polyprotein (Fragment).
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Polyprotein (Fragment).
                                                                                                                                                                                      578 AA.
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HSSP; Q88653; 10KE.
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QBCV3;
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Pfam; PF01869; Flavi glycoprot; 1
Pfam; PF01004; Flavi M; 1.
ProDom; PF00948; Flavi NS1; 1.
ProDom; PD001496; Plavi NS1; 1.
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ID 012290 9FLAV PRELIMINARY;
AC 0122907 ... intentated into
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QZEDJO.
Q3ZPJO.
27-SEP-2005, integrated into UniProtKB/TrEMBL.
27-SEP-2006, entry version 1.
07-FEB-2006, entry version 3.
Polyprotein (Fragment).
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Pyke A.T., Hanna J., Richards A., Taylor C.T., Morgan A., Humphreys J., Brookes D., Smith G.A.;
"Defining Dengue in the New Millennium.";
Arbovirus Res. Aust. 0:0-0(2005).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL, AY706011, AAW62469.1; -; Genomic_RNA.
GO; GO:0016021; C:integral to membrane; TEA.
GO; GO:0019028; C:viral capsid; TEA.
GO; GO:001901; C:viral envelop: TEA.
GO; GO:001901; C:viral envelop: TEA.
GO; GO:0019058; F:structural molecule activity; IEA.
GO; GO:0019058; F:structural molecule activity; IEA.
GO; GO:0019058; F:structural molecule activity; IEA.
InterPro; IRR011999; Flavi MS1.
InterPro; IRR011999; Flavi NS1.
InterPro; IRR011998; Vrl glyE_cen_dim.
PF02832; Flavi_glyE_cen_dim.
                                                                                                                                                                                                                                                                                                                                            61243 MW; F8DEA740BB4DD8DF CRC64;
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                                                                Potential.
Potential.
N-linked (GLONAC. ..) (()
N-linked (GLONAC. ..) (()
By similarity.
By similarity.
By similarity.
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By similarity.
By similarity.
  Nonstructural protein 1.
                       /FTId=PRO_0000037924
Potential.
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Pfam; PF01004; Flavi_M; 1.
Pfam; PF00948; Flavi_NS1; 1.
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Best Local Similarity 87.5.
7; Conservative
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STRAIN=SLMC70/1995/human;
PubMed=16222028;
Salda L.T., Parquet M.D., Matias R.R., Natividad F.F., Kobayashi N.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Dengue virus type 2.
Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
NCBI_TaxID=11060;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "MOLECULAR EPIDEMIOLOGY OF DENGUE 2 VIRUSES IN THE PHILIPPINES:
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                                                                                                                                                                                                 80.4%; Score 45; DB 2; Length 661;
87.5%; Pred. No. 33;
cive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Salda L.T.D.;
Submitted (OCT-2004) to the EMBL/GenBank/DDBJ databases.
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73072 MW; 654A28D6B96FB5A8 CRC64;
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73081 MW; 6F6C51D6BEC33CA8 CRC64;
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GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:005198; F:structural molecule activity; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
GO:0005198; F:structural molecule activity; IEA. GO:0019058; P:viral infectious cycle; IEA.
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QJECKÉ.
22-NOV-2005, integrated into UniProtKB/TrEMBL.
22-NOV-2005, sequence version 1.
07-FEB-2006, entry version 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           73 9FLAV
Q3BCV5_9FLAV PRELIMINARY; PRT; 661 AA.
Q3BCV5;
22-NOV-2005, integrated into UniProtKB/TrEMBL.
07-FEB-2006, entry version 1.
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Am. J. Trop. Med. Hyg. 73:796-802(2005)
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STRAIN-SLMC70/1995/human;
                                                                                                                                                                                                 Query Match
Best Local Similarity 87.5
Matches 7; Conservative
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                                                                                                                                                 661 AA;
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Q3BCX6_9FLAV
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22-NOV-2005, sequence version 1.
07-FBB-2006, entry version 3.
Polyprotein (Fragment).
Dengue virus type.
Viruses; seRNA positive-strand viruses, no DNA stage; Flaviviridae;
                                                                                                                                                                         Morita K.;
"MOLECULAR EPIDEMIOLOGY OF DENGUE 2 VIRUSES IN THE PHILIPPINES:
GENOTYPE SHIFT AND LOCAL EVOLUTION.";
Am. J. Trop. Med. Hyg. 73:796-802(2005).
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Submitted (OCT-2004) to the EMBL/GenBank/DDBJ databases.
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661 AA; 73049 MW; 2A644DEADA728CF2 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL, AY786198; AAX18216.1; -; Genomic_RNA.
GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:005199; F:structural molecule activity; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
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GO; GO:0016021; c:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
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Am. J. Trop. Med. Hyg. 73:796-802(2005).
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Q3BCV4;
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Matches 7; Conservative
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PubMed=16222028;
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                                                                                          STRAIN=01St193/2001;
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   NCBI_TaxID=11060;
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SEQUENCE
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EMBL; AY786374; AAX18192.1; -; Genomic_RNA
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PubMed=16222028;
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Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
                    Viruses; ssrnA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
                                                                                                                       "MOLECULAR EPIDEMIOLOGY OF DENGUE 2 VIRUSES IN THE PHILIPPINES:
GENOTYPE SHIFT AND LOCAL EVOLUTION.";
Am. J. Irop. Med. Hyg. 73:796-802(2005).
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GENOTYPE SHIFT AND LOCAL EVOLUTION.";
Am. J. Trop. Med. Hyg. 73:796-802(2005).
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Pred. No. 33;
0; Mismatches 1; Indels
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Submitted (OCT-2004) to the EMBL/GenBank/DDBJ databases.
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73143 MW; 5509B5931AE2BF2B CRC64;
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GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:005198; F:structural molecule activity; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
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Best Local Similarity 87.5%;
Matches 7; Conservative
Polyprotein (Fragment).
Dengue virus type 2.
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                                                                   NUCLEOTIDE SEQUENCE.
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STRAIN=00St22/2000;
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                                                                               ,2000;
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                                            NCBI TaxID=11060;
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PubMed=16222028;
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PubMed=16222028;
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GO; GO: 0019028
GO; GO: 0019031
GO; GO: 0019036
GO; GO: 0019058
POLYPICTER
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SEQÜENCE 661
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Q3BCX7_9FLAV
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Distributed under the Creative Commons Attribution-NoDerivs License
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87.5%; Pred. No. 33;
tive 0; Mismatches 1; Indels
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Submitted (OCT-2004) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                         73083 MW; SF56106DA1550EF6 CRC64;
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GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:005198; F:structural molecule activity; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
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GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelops; IEA.
GO; GO:0005198; F:structural molecule activity; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
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Am. J. Trop. Med. Hyg. 73:796-802(2005).
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Q3BCX9 9FLAV
ID Q3BCX9 9FLAV PRELIMINARY;
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Best Local Similarity 87...
7; Conservative
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              Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms Distributed under the Creative Commons Attribution-NoDerivs License
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22-NOV-2005, sequence version 1.
07-FEB-2006, entry version 3.
Polyprotein (Fragment).
Dengue virus type 2.
Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae; Flavivirus; Dengue virus group.
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Am. J. Trop. Med. Hyg. 73:796-802(2005).
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Pred. No. 33;
0; Mismatches 1; Indela
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73166 MW; 84C50AFD2358F08C CRC64;
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GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019011; C:viral envelope; IEA.
GO; GO:00190518; F:structural molecule activity; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
                                                          EMBL, AY786371; AAX18189.1; -; Genomic RNA.
GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:005198; F:structural molecule activity; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
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Q3BCYI 9FLAV
ID Q3BCYI 9FLAV PRELIMINARY; PRT;
AC Q3BCYI,
                                                                                                                                                                                                                                                           80.4%;
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Best Local Similarity 87.5
Matches 7; Conservative
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PubMed=16222028;
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Viruses, seRNA positive-strand viruses, no DNA stage, Flaviviridae,
Flavivirus, Dengue virus group.
NCBI_TaxID=11060;
                                                                                              Virūses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
NCBI_TaxID=11060;
                                                                                                                                                                                                                                                     "MOLECULAR BPIDEMIOLOGY OF DENGUE 2 VIRUSES IN THE PHILIPPINES:
GENOTYPE SHIFT AND LOCAL EVOLUTION.";
Am. J. Trop. Med. Hyg. 73:796-802(2005).
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87.5%; Pred. No. 33;
1.ve 0; Mismatches 1; Indels
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STRALM-CL127/1998;
Salda L.T.D.
Submitted (OCT-2004) to the EMBL/GenBank/DDBJ databases.
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Submitted (OCT-2004) to the EMBL/GenBank/DDBJ databases.
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73072 MW; 654A28D6B96FB5A8 CRC64;
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GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:005299; F:structural molecule activity; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
Q3BCX9;
22-NOV-2005, integrated into UniProtKB/TrEMBL.
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Am. J. Trop. Med. Hyg. 73:796-802(2005).
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QBCYO;
                              22-NOV-2005, sequence version 1.
07-FEB-2006, entry version 3.
Polyprotein (Fragment).
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PubMed=16222028;
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STRAIN=PCMC60/1998;
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07-FEB-2006, entry version 3.
Polyprotein (Fragment).
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STRAIN=DOH90/1995;
Salda L.T.D.;
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                    STRAIN=DOH97/1995;
Salda L.T.D.;
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Q3BCY4 9FLAV
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SEQUENCE 66
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                                                                                                                                                                Dengue virus type 2.
Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
NCBI_TaxID=11060;
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Am. J. Trop. Med. Hyg. 73:796-802(2005).
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87.5%; Pred. No. 33;
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Submitted (OCT-2004) to the EMBL/GenBank/DDBJ databases.
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661 AA; 73072 MW; 654A28D6B96FB5A8 CRC64;
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GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:0005198; E:structural molecule activity; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
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22-NOV-2005, integrated into UniProtKB/TrEMBL
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Polyprotein (Fragment).
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PubMed=16222028;
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Flavivirus; Dengue virus group.
NCBI_TaxID=11060;
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Am. J. Trop. Med. Hyg. 73:796-802(2005).
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Submitted (OCT-2004) to the EMBL/GenBank/DDBJ databases.
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                                                                                                                                                                                                                                                                                                                                                                                                                                              661 661 661 661 661 AA; 73096 MW; CF865AAE54ADE0F1 CRC64;
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73150 MW; 654F225FA969639F CRC64;
                                                                                                                                                              EMBL, AY786368; AAX18186.1; -; Genomic_RNA.
GO; GO:0016021; C:integral to membrane; IEA.
GO; CO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:0001903; F:structural molecule activity; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
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GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:001908; F:structural molecule activity; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
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87.5%; Pred. No. 33;
ative 0; Mismatches
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STRAIN-BC134-Merida-94;
PubMed=1551647;
Lorono-Pino M.A., Farfan-Ale J.A., Zapata-Peraza A.L.,
Rosado-Paredes E.P., Flores-Flores L.P., Garcia-Rejon J., Diaz F.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Dengue virus type 2.
Viruses, saRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus, Dengue virus group.
NCBI_TaxID=11060;
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Viruses, saRNA positive-strand viruses, no DNA stage, Flaviviridae,
Flavivirus, Dengue virus group.
NCBI_TaxID=11060;
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"MOLECULAR EPIDEMIOLOGY OF DENGUE 2 VIRUSES IN THE PHILIPPINES.
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87.5%; Pred. No. 33;
tive 0; Mismatches 1; Indels
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661 AA; 73072 MW; 654A28D6B96FB5A8 CRC64;
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GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:005199; F:structural molecule activity; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
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                                                                                                                                                                                                                                                                                               661 AA.
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Am. J. Trop. Med. Hyg. 73:796-802(2005).
                                                                                                                                                                                                                                                                                                   PRT;
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07-FEB-2006, entry version 3.
Polyprotein (Fragment).
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QBCXS;
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                                                                    124 ETWILRHP 131
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PubMed=16222028;
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                        ETWFLRHP 9
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PubMed=15516647;
Lorono-Pino M.A., Farfan-Ale J.A., Zapata-Peraza A.L., Diaz F.J.,
Rosado-Paredes E.P., Flores-Flores L.F., Garcia-Rejon J., Diaz F.J.,
Blitvich B.J., Jimenez-Rios E., Blair C.D., Olson K.E., Black W. IV,
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07-DEC-2004, sequence version 1.
07-DEC-2004, sequence version 1.
07-DEC-2004, version 8.
Delyprotein (Fragment).
Dengue virus type 2.
Viruses, saRNA positive-strand viruses, no DNA stage; Flaviviridae; Plavivirus; Dengue virus group.
NCBI_TAXID=11060;
Beaty B.J.;
"Introduction of the American/Asian genotype of dengue 2 virus into "Introduction State of Mexico.";
Am. J. Trop. Med. Hyg. 71:485-492(2004).
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73207 MW; A919612986E04157 CRC64;
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SMR; Q5V187; 167-560.
GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:0019031; F:setructural molecule activity; IEA.
GO; GO:001908; F:setructural molecule activity; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
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SMR, OSO186, 167-560.

GO, GO:0019028, C.viral capsid, IEA.

GO, GO:0019028, C.viral capsid, IEA.

GO, GO:0019038, E.viral infections cycle; IEA.

GO, GO:0019058, F.viral infections cycle; IEA.

InterPro; IPR011999, Flav glyE.cn.dm.

InterPro; IPR000535, Flavi gryep.

InterPro; IPR001355, Flavi gryep.

InterPro; IPR011999, VI-glyE IG-like.

InterPro; IPR011999, VI-glyE IG-like.

InterPro; IPR011999, VI-glyE IG-like.

Pfam; PF01883; Flavi glyCop.C.; I.

Pfam; PF0184; Flavi glyCop.C.; I.

Pfam; PF01044; Flavi M: I.
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QSVI87_9FLAV PRELIMINARY; PRT;
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PubMed=15516647;
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Matches 7; Conservative
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                                               2 ETWFLRHP 9
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OSVIGO,
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Q5V189;
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Am. J. Trop. Med. Hyg. 71:485-492(2004).
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Rosado-Paredes E.P., Flores-Flores L.F., Garcia-Rejon J., Diaz F.J.,
Blitvich B.J., Jimenez-Rios E., Blair C.D., Olson K.E., Black W. IV,
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87.5%; Pred. No. 33;
tive 0; Mismatches 1; Indels
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SMR; QSV188; 167-560.
GO; GO:0019021; C:integral to membrane; IEA.
GO; GO:0019021; C:integral to membrane; IEA.
GO; GO:0019031; C:viral capsid; IEA.
GO; GO:001988; F:structural molecule activity; IEA.
GO; GO:001988; F:structural molecule activity; IEA.
GO; GO:001988; F:structural infectious cycle; IEA.
InterPro; IPR011999; Flav glyE_cen_dm.
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73092 MW; 482C14A6B3B179FA CRC64;
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                  InterPro; IPR000069; Flavi_M.
InterPro; IPR0010535; Flavi_Dropep.
InterPro; IPR000305; Flavi_Dropep.
InterPro; IPR011998; Vrl_glyE_cen_dim.
Pfam; PF02812; Plavi_glycop_C; 1.
Pfam; PF00869; Flavi_glycoprot; 1.
Pfam; PF01064; Flavi_M; 1.
Pfam; PF01570; Flavi_Dropep; 1.
InterPro, IPR011999; Flav glyE_cen_dm.
InterPro, IPR00069; Flavi_M.
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GO; GO:0019018; E:viral envelope; IEA.
GO; GO:0019018; F:structural molecule activity; IEA.
GO; GO:0019058; F:viral infectious cycle; IEA.
InterPro; IPR011999; Flav glyE_cen_dm.
InterPro; IPR000069; Flavi M.
InterPro; IPR001316; Flavi III glyE_cen_dim.
Pfam; PF02832; Flavi glyE_cen_dim.
Pfam; PF02832; Flavi glyCoprot; I.
Pfam; PF00104; Flavi M; I.
Pfam; PF01044; Flavi M; I.
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Polyprotein (Fragment).
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PubMed=15516647;
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Lorono-Pino M.A., Farfan-Ale J.A., Zapata-Peraza A.L.,
Rosado-Paredes E.P., Flores-Flores L.F., Garcia-Rejon J., Diaz F.J.,
Belitvich B.J., Jimenez-Rios E., Blair C.D., Olson K.E., Black W. IV,
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Am. J. Trop. Med. Hyg. 71:485-492(2004).
                                                                                                                       NUCLEOTIDE SEQUENCE.
STRAIN=11336/St. Elena 01;
PubMed=15516647;
Lorono-Pino M.A., Farfan-Ale J.A., Zapata-Peraza A.L.,
Rosado-Paredes E.P., Flores-Flores L.F., Garcia-Rejon J., Diaz F.J.,
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Am. J. Trop. Med. Hyg. 71:485-492(2004).
Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
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GO; GO:0019021; C:viral capsid; IEA.
GO; GO:0019028; P:structural molecule activity; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
InterPro; IPR011999; Flav glyE_cen_dm.
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InterPro; IPR000346; Plavi glyE_glike.
InterPro; IPR011998; VII_GlyE_cen_dim.
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                                                                                                                                                                                (MAXY-) MAXYGEN INC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 VESWFLRNP
                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 167 AA;
                                                                                                  WO2003102166-A2
                                                                               Dengue virus.
          17-JUN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17-OCT-2003
                                                                                                                      11-DEC-2003
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AAW75412
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                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention relates to a novel recombinant or synthetic polypeptide comprising an amino acid sequence that has at least about 90% sequence identity to any of the 20 fully defined amino acid sequences given in the specification. The polypeptide of the invention demonstrates virucide activity and may be useful for inducing an immune response to Plaviviruses (arboviruses group B), including Dengue viruses, as well as in detecting and/or diagnosing the presence of antibodies against the Dengue virus serotypes in a sample and for gene therapy. The current sequence is that of a Dengue virus type 4 (DEN-4) C15/truncated prM antigen fusion protein of the invention which comprises the C-terminal 15 amino acids of the capsid protein fused to a truncated form of the prM protein lacking the C-terminal 15 amino acids.
         Plasmid p
Plasmid p
Plasmid p
                                                                                                                                                                                                                                                                                                                                                                                   New recombinant or synthetic polypeptides and polynucleotides useful for diagnosing, preventing or treating diseases associated with flaviviruses,
                                                                                                                                                                                          virucide; Flavivirus; arboviruses group B; gene therapy; truncated prM;
                                                                                                                                                                       Dengue virus type 4 (DEN-4) C15/truncated prM antigen fusion protein.
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 Adw23990 J
Abp57874 F
Abp57876 F
Abp57875 F
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               88.5%; Score 46; DB 8; Length 167; 88.9%; Pred. No. 2.7;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                         Disclosure; SEQ ID NO 120; 409pp; English.
                                                            ALIGNMENTS
ADW23990
ABP57874
ABP57876
ABP57875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADN37499 standard; protein; 167 AA.
                                                                                                            ADN37495 standard; protein; 167 AA
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                                                                                                                                                                                                                                                                                 26-FEB-2003; 2003WO-US005918.
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                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                       including dengue viruses.
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 682
685
685
685
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                                                                                                                                                                                                                                                                                                                                             Punnonen J,
                                                                                                                                                                                                                                                                                                                         (MAXY-) MAXYGEN INC
                                                                                                                                                                                                                                                                                                                                                                WPI; 2004-043106/04
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Matches 8; Conserv
                                                                                                                                                                                                                       Dengue virus type
 71.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 167 AA;
                                                                                                                                                                                                                                          WO2003102166-A2.
                                                                                                                                                                                                  capsid; DEN-4.
                                                                                                                                                   17-JUN-2004
 37
                                                                                                                                ADN37495;
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                                                                                         RESULT 1
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The invention relates to a novel recombinant or synthetic polypeptide comprising an amino acid sequence that has at least about 90% sequence identity to any of the 20 fully defined amino acid sequences given in the specification. The polypeptide of the invention demonstrates virucide activity and may be useful for inducing an immune response to Flaviviruses (arboviruses group B), including Dengue viruses, as well as in detecting and/or diagnosing the presence of antibodies against the Dengue virus serotypes in a sample and for gene therapy. The current sequence is that of a Dengue virus C15/truncated prw antigen fusion protein of the invention which comprises the C-terminal 15 amino acids of the capsid protein fused to a truncated form of the prW protein lacking the C-terminal 15 amino acids.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New recombinant or synthetic polypeptides and polynucleotides useful for diagnosing, preventing or treating diseases associated with flaviviruses, including dengue viruses.
                                                                                     virucide; Flavivirus; arboviruses group B; gene therapy; truncated prM;
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Dengue virus C15/truncated prM antigen fusion protein - SEQ ID 124.
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Pred. No. 2.7;
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The invention relates to a novel recombinant or synthetic polypeptide comprising an amino acid sequence that has at least about 90% sequence identity to any of the 20 fully defined amino acid sequences given in the specification. The polypeptide of the invention demonstrates virucide activity and may be useful for inducing an immune response to Plaviviruses (arboviruses group B), including Dengue viruses, as well as in detecting and/or diagnosing the presence of antibodies against the Dengue virus serotypes in a sample and for gene therapy. The current sequence is that of the Dengue virus type 1 (DEN-4)/unidentified Dengue virus C15/pm/E partially human codon-optimised antigen fusion protein of the invention which comprises 15 amino acids of the DEN-4 capsid (C) protein fused to the full-length DEN-4 codon-optimised/unidentified Dengue Dengue virus prw protein and DEN-4 codon-optimised/unidentified Dengue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New recombinant or synthetic polypeptides and polynucleotides useful for diagnosing, preventing or treating diseases associated with flaviviruses, including dengue viruses.
                                                                 New recombinant or synthetic polypeptides and polynucleotides useful for diagnosing, preventing or treating diseases associated with flaviviruses.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 675;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 46; DB 8;
Pred. No. 13;
0; Mismatches
                                                                                                                                                     Example 28; SEQ ID NO 250; 409pp; English
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    virus envelope (E) protein
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Best Local Similarity 88.9
Matches 8; Conservative
                                                                                                            dengue viruges
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    WPI; 2004-043106/04.
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                      N-PSDB; ADN37629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 675 AA;
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                                                                                                            including
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Synthetic.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This protein represents a fusion protein comprising 2 M protein epitopes from Dengue virus type 2 and type 4 inserted into the P64K protein from Neisseria meningitidis. Synthetic peptides based on the Dengue virus epitope sequences (AAM75408-W15408) and fusion proteins can be used to raise antibodies. The peptides, protein and antibodies are all useful for diagnosis and treatment of Flavivirus infection, e.g. in vaccines. (Updated on 25-MAR-2003 to correct PI field.) (Updated on 17-OCT-2003 to standardise OS field)
                                                                                                                                                                                                                                  Vazquez Ramudo S, Guzman Tirado G, Guillen Nieto GE, Pardo Lazo OL, Chinea Santiago G, Perez Diaz AB, Pupo Antunez M, Rodriguez Roche R; Reyes Acosta O, Garay Perez HE, Padron Palomares G, Alvarez Vera M; Morier Diaz L, Perez Insuita O, Pelegrino Martinez De La Coterri Pedro,
                                                                                                                                                                                                                                                                                                                                                                                   New peptide(s) and fusion proteins useful for diagnosis and treatment of flavivirus infection - contain cross-reactive epitopes from Dengue virus pre-M/M protein and can induce neutralising antibodies.
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88.9%; Pred. No. 12;
ive 0; Mismatches 1; Indels
                                                                                                                                                                (CIGB-) CIGB CENT ING GENETICA & BIOTECNOLOGIA (IPKM-) IPK INST MEDICINA TROPICAL KOURI PEDRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 7; Page 32-34; 64pp; Spanish.
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WO9831814-A1
                                                                                   13-JAN-1998;
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                                        23-JUL-1998
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RESULT 4 ADN37625

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Gaps

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Length 675;

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Score 46; DB 8 Pred. No. 13; 0; Mismatches

88.5%; 88.9%;

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Conservative

Query Match Best Local Similarity 8; Conserva

Sequence 675 AA;

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The invention relates to a novel recombinant or synthetic polypeptide comprising an amino acid sequence that has at least about 90% sequence identity to any of the 20 fully defined amino acid sequences given in the specification. The polypeptide of the invention demonstrates virucide activity and may be useful for inducing an immune response to Flaviviruses (arboviruses group B), including Dengue viruses, as well as in detecting and/or diagnosing the presence of antibodies against the Dengue virus serotypes in a sample and for gene therapy. The current sequence is that of the Dengue virus type 1 (DEN-4)/unidentified Dengue the invention which comprises 15 amino acids of the DEN-4 capsid (C) protein fused to the full-length DEN-4 codon-optimised/unidentified Dengue virus prup protein and DEN-4 codon-optimised/unidentified Dengue virus prup protein and DEN-4 codon-optimised/unidentified Dengue virus prup protein and DEN-4 codon-optimised/unidentified Dengue virus prup protein and DEN-4 codon-optimised/unidentified Dengue
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Dengue virus C15/prM/E antigen fusion protein - SEQ ID 139.
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                                                                                                                                                                                                                                                                                                                                                                                                  1; Indels
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Pred. No. 13;
0; Mismatches
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                                                                                                                                                                                                                                                                           virus envelope (E) protein
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N-PSDB; ADN37579.
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                                                                                                                                                                                                                                                                                                                    Sequence 675 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New recombinant or synthetic polypeptides and polynucleotides useful for diagnosing, preventing or treating diseases associated with flaviviruses, including dengue viruses.
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                                                                                                                                                                                                                                          virucide; Flavivirus; arboviruses group B; gene therapy; Cl5/prM/E; prM;
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                                                                                                                                                                                                            Dengue virus C15/prM/B antigen fusion protein - SEQ ID 145.
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                                                                                                               ADN37520 standard; protein; 675 AA.
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Matches 8; Conservative
                               139 VESWILRNP 147
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1 VESWFLRNP
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The invention relates to a novel recombinant or synthetic polypeptide comprising an amino acid sequence that has at least about 90% sequence identity to any of the 20 fully defined amino acid sequences given in the specification. The polypeptide of the invention demonstrates virucide activity and may be useful for inducing an immune response to Plaviviruses (arboviruses group B) including Dengue viruses, as well as in detecting and/or diagnosing the presence of antibodies against the sequence is that of the Dengue virus type 4 (DEN-4) Den-4CIS/prw/F antigen fusion protein of the invention which comprises 15 amino acids of the capsid (C) protein fused to the full-length prM protein and envelope
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Pred. No. 13;
0; Mismatches
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8; Conservative
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                                                                                                              (MAXY-) MAXYGEN INC
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N-PSDB; ADN37717.
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11-DEC-2003
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                                                                                                                              virucide; Flavivirus; arboviruses group B; gene therapy; C15/prM/E; prM; envelope; capsid.
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Den-4C15/prM/E; prM; envelope; capsid.
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                                                                                        Dengue virus C15/prM/E antigen fusion protein - SEQ ID 141
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Pred. No. 13;
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                                                                                                                                                                                      Dengue virus.
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                                                                                     The invention relates to a novel recombinant or synthetic polypeptide comprising an amino acid sequence that has at least about 90% sequence identity to any of the 20 fully defined amino acid sequences given in the specification. The polypeptide of the invention demonstrates virucide activity and may be useful for inducing an immune response to Plaviviruses (arboviruses group B), including Dengue viruses, as well as in detecting and/or diagnosing the presence of antibodies against the Dengue virus serotypes in a sample and for gene therapy. The current the invention which comprises 15 amino acids of the capsid (c) protein of the invention which comprises 15 amino acids of the capsid (c) protein fused to the full-length prM protein and envelope (E) protein.
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diagnosing, preventing or treating diseases associated with flaviviruses, including dengue viruses.
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Pred. No. 13;
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                                                      Claim 40; SEQ ID NO 343; 409pp; English
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the invention which comprises 15 amino acids of the capsid (C) protein fused to the full-length prM protein and envelope (E) protein.
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                                                                                                                                                                                                                                                                                                                                            Dengue virus C15/prM/E antigen fusion protein - SEQ ID 248.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 46; DB 8; Length 678;
Pred. No. 13;
0; Mismatches 1; Indels
                                                                           8; Length 677;
                                                                                                         1; Indels
                                                                           Score 46; DB E Pred. No. 13; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Example 13; SEQ ID NO 248; 409pp; English.
                                                                                                                                                                                                                                                  ADN37623 standard; protein; 678 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Brinkman AM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 26-FEB-2003; 2003WO-US005918.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26-FEB-2002; 2002US-0360030P.
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                                                                             88.5%;
88.9%;
                                                                                                                                                                                                                                                                                                               (first entry)
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Best Local Similarity 86.2
                                                                                                         8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          142 VESWILRNP 150
                                                                                                                                                                      139 VESWILRNP 147
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Punnonen J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2004-043106/04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (MAXY-) MAXYGEN INC
                                                                              Query Match
Best Local Similarity
                                                                                                                                         1 VESWFLRNP
                                                                                                                                                                                                                                                                                                                                                                                          envelope; capsid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 678 AA;
                                              Sequence 677 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO2003102166-A2
                                                                                                                                                                                                                                                                                                                                                                                                                         Dengue virus.
                                                                                                                                                                                                                                                                                                               17-JUN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11-DEC-2003
                                                                                                                                                                                                                                                                                ADN37623;
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                                                                                                                                                                                                                     RESULT 12
ADN37623
                                                                                                             Matches
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RESULT 13

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This sequence represents the amino acid sequence of one of the candidiate vaccine viruses of the invention. This sequence is based on a fragment of the polyproctein from Dengue 2 virus, strain 16681. The polyproctein from Dengue 2 virus, strain 16681. The polyproctein comprises the capsid, prw, M. E. NS1, NS2A, NS2B, NS3, NS4A, NS4B and NS5 proteins. The quadravalent vaccine of the invention comprises an attenuated Dengue virus clone, PDK-53, and a chimeric DEN-2/1 virus, a chimeric DEN-2/3 virus, and/Or a chimeric DEN-2/4 virus. The new quadravalent vaccines are used to protect against infection by all four serotypes of dengue virus, DEN-1, DEN-2, DEN-3 and DEN-4, which can lead to dengue fever or fatal dengue haemorrhagic fever/dengue shock syndrome (DHF/DSS). Host cells are used to produce the recombinant protein products of the DNA constructs which are used in the vaccines. (Updated on 27-AUG-2003 to correct OS field.)
                                                                                                                                              Dengue 2 virus; polyprotein; capsid; prM; M; E; NS1; NS2A; NS2B; NS3; NS4A; NS4B; NS5; PDK-53; quadravalent vaccine; immunity; serotype; chimeric DEN-2/1 virus; chimeric DEN-2/4 virus; dengue fever; fatal dengue haemorrhagic fever; dengue shock syndrome; DHF; DSS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PDK-53, a clone of infectious attenuated Dengue 2 virus strain 16681 also chimeric DEN-2/1, DEN-2/3 and DEN-1/4 viruses, used as a quadravalent vaccine for protecting against Dengue virus infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bhamarapravati N, Butrapet S, Chang J, Gubler DJ, Halstead SB;
Kinney R, Trent DW;
                                                                                                                            Amino acid sequence of DEN-4 1036 PDK-48 vaccine virus.
                                                                                                                                                                                                                                                                                                                        1. .50
/label= Partial_capsid_protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                     712. .725
/label= Partial_NS1_protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEPT HEALTH & HUMAN SERVICES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 35; Page 180-183; 261pp; English.
                                                                                                                                                                                                                                                                                                       cocation/Qualifiers
               AAW06594 standard; protein; 725 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (USSH ) US DEPT HEALTH & HUMAN (UYMA-) UNIV MAHIDOL AT SALAYA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         96WO-US009209.
                                                                                                                                                                                                                                                                                                                                                          51. .141
/label= prM
142. .216
/label= M
                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                        217. .711
/label= E
                                                                               (revised)
                                                                                                                                                                                                                                                            Dengue virus type 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 1997-052330/05.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1996;
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                                                                             27-AUG-2003
15-SEP-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19-DEC-1996
                                                                                                                                                                                                                                                                           Synthetic
                                               AAW06594;
                                                                                                                                                                                                                                                                                                                        Protein
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                                                                                                                                                                                                                                                                                                                                                                                          Protein
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AAW06594
ID AAW(
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The invention relates to avirulent, immunogenic flavivirus chimeras comprising amino acid mutations in the non-structural proteins of a flavivirus. Chimeric viruses containing the attenuation-mutated non-structural genes of the virus are used as a backbone into which the structural genes of the virus are used as a backbone into which the structural protein genes of a second flavivirus strain are inserted. These chimeric viruses elicit pronounced immunogenicity but lack the accompanying clinical symptoms of viral disease. Attenuated chimeric flaviviruses are combined in a pharmaceutical composition to confer simultaneous immunity against several strains of pathogenic flaviviruses such as dengue virus serotypes DEN-1, DEN-2, DEN-3 and DEN-4. Immunogenic flavivirus chimeras are also used as immunogens or multivalent vaccines to confer simultaneous protection against infections. The present sequence is wild-type, virulent dengue-4 (DEN-4) 1036 virus protein used for constructing flavivirus chimeras. Dengue virus types 1-4 (DEN-1 to DEN-4) are mosquito-borne flavivirus pathogens. The flavivirus protein contains a capsid protein (E) and non-structural proteins (NSI-NS2A-NS3-NS4A-NS3-NS4B-NS5). (Updated on 11-SEP-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        for
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                                                                                                                                                                                                                                                                              Flavivirus, Dengue virus-4; DEN-4; vaccine; infection; virucidal; avirulent; immunogenic; viral disease; pharmaceutical.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chimeric flaviviruses that are avirulent and immunogenic, useful vaccinating against a range of dengue viruses.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bhamarapravati
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Pred. No. 76;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Butrapet S, Gubler DL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (USSH ) US DEPT HEALTH & HUMAN SERVICES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Example 3; Page 389-397; 470pp; English.
                                                                                                                                                                                                                                             Wild-type, virulent DEN-4 1036 protein.
                                                                                                                     AAE07991 standard; protein; 3387 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                          16-FEB-2001; 2001WO-US005142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             16-FEB-2000; 2000US-0182829P.
                                                                                                                                                                                            (revised)
(first entry)
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Matches 8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Kinney CYH,
                                173 VESWILRNP 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VESWILRNP 244
                                                                                                                                                                                                                                                                                                                                    Dengue virus; type IV
 0
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1 VESWFLRNP
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                                                                                                                                                                                                                                                                                                                                                                      WO200160847-A2.
                                                                                                                                                                                        11-SEP-2003
01-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                         23-AUG-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Kinney RM,
                                                                                                                                                         AAE07991;
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                                                                                      RESULT 14
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RESULT 15

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Gaps

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DB 2; Length 725; 1; Indels

88.5%; Score 46; DB 88.9%; Pred. No. 14; iive 0; Mismatches

Query Match
Best Local Similarity 88.9
Matches 8; Conservative

Gaps

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1; Indels

DB 4; Length 3387; 76;

AAE07992;

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The present invention relates to novel mutated flaviviruses comprising a phenotype in which the viral genome is modified by introduction of a mutation, singly or in combination, taken from mutations from recombinant virus bearing Vero adaptation mutations, putative Vero cell adaptation mutations of dengue type 4 virus (DEN4) or mutations known to attenuate useful for fine tuning the attenuation and growth characteristics of dengue virus vaccines for the prevention and youth characteristics of infection. The present sequence is Dengue virus type 4 strain rDEN4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New mutated flavivirus, useful for fine tuning the attenuation and characteristics of dengue virus vaccines for the prevention and/or treatment of dengue virus infection.
                                                                                                                                                                                                                                                                                                                                                                                                        Attenuation; growth; vaccine; infection; Dengue virus type 4.
                                                                                                                                                                                                                                                                                                                                                                Recombinant dengue virus type 4 strain rDEN4 protein.
Score 46; DB 4
Pred. No. 76;
0; Mismatches
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Pred. No. 76;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Disclosure; Page 127-128; 246pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (USSH ) US DEPT HEALTH & HUMAN SERVICES.
(BLAN/) BLANEY J E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hanley KA
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                                                                                                                                                                                                                                     AAE35313 standard; protein; 3387 AA.
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  88.5%;
88.9%;
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                                            Conservative
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236 VESWILRNP 244
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  Query Match
Best Local Similarity
Matches 8; Conserv
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les 8; Conser
                                                                                     VESWFLRNP
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N-PSDB; AAD53911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200295075-A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                  Dengue virus.
                                                                                                                                                                                                                                                                                                                        28-MAY-2003
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Matches
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ID AAE3
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AC AAE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The invention relates to avirulent, immunogenic flavivirus chimeras comprising amino acid mutations in the non-structural proteins of a flavivirus. Chimeric viruses containing the attenuation-mutated nonstructural genes of the virus are used as a backbone into which the structural protein genes of a second flavivirus strain are inserted. These chimeric viruses elicit pronounced immunogenicity but lack the accompanying clinical symptoms of viral disease. Attenuated chimeric flaviviruses are combined in a pharmaceutical composition to confer simultaneous immunity against several strains of pathogenic flaviviruses is and natural aserotypes DEN-1, DEN-2, DEN-3 and DEN-4. Immunogenic flavivirus chimeras are also used as immunogens or multivalent vaccines to confer simultaneous protection against infections. The present constructing flavivirus chimeras. Dengue virus types 1-4 (DEN-1 to DEN-4) are mosquito-borne flavivirus pathogens. The flavivirus protein contains a capsid protein (C), premembrane/membrane protein (prM), an envelope protein (E) and non-structural proteins (BDK) cells 48 chimes is designated as DEN-4 burse.
                                                                                                                                                                                         Flavivirus, Dengue virus-4; DEN-4; vaccine; infection; virucidal; mutein; avirulent; immunogenic; viral disease; pharmaceutical; mutant; variant.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Chimeric flaviviruses that are avirulent and immunogenic, useful for vaccinating against a range of dengue viruses.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bhamarapravati N;
                                                                                                                                                                                                                                                                                                                                                                                                          substituted with His"
                                                                                                                                                                                                                                                                                                                                                                note= "Wild type Glu substituted with Lys"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           'note= "Wild type Ile substituted with Phe"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             'note= "Wild type Ala substituted with Val"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note= "Wild type Asp substituted with Tyr'
                                                                                                                                                 Attenuated, vaccine-strain DEN-4 PDK-48 protein variant.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  note= "Wild type Leu substituted with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   'note= "Wild type Leu substituted with
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                                                                                                                                                                                                                                                                                                                                                                                                        note= "Wild type Gln
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  AAE07992
ID AAE07992 standard; protein; 3387
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                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Kinney CYH,
                                                                                                                                                                                                                                                           Dengue virus; type IV.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2001-497162/54.
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                                                                                                                                                                                                                                                                                                                                          Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                    Misc-difference
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                                                                                                       01-NOV-2001
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growth

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Gaps

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Indels

1;

DB 6; Length 3387; 76;

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Bhamarapravati

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The invention relates to avirulent, immunogenic flavivirus chimeras comprising amino acid mutations in the non-structural proteins of a flavivirus. Chimeric viruses containing the attenuation-mutated non-structural genes of the virus are used as a backbone into which the structural genes of the virus are used as a backbone into which the structural protein genes of a second flavivirus strain are inserted. These chimeric viruses elicit pronounced immunogenicity but lack the accompanying clinical symptoms of viral disease. Attenuated chimeric flaviviruses are combined in a pharmaceutical composition to confer simultaneous immunity against several strains of pathogenic flaviviruses such as dengue virus serctypes DEN-1, DEN-2, DEN-3 and DEN-4. Immunogenic flavivirus chimeras are also used as immunogens or multivalent vaccines to confer simultaneous protection against infections. The present sequence is dengue virus (DEN)-2/4-VP1 fusion protein related to the inventor in this fusion protein contains attenuated DEN-2 DEN-53V backbone comprising a valine at the non-structural protein (N3)-250 and the premembrane/membrane protein (PM) and an envelope protein (E) from wildtype DEN-4 1036 virus. (Updated on 11-SEP-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gene therapy; protein purification; virucide; cytostatic; vaccine; hemorrhage; bleeding; infection; flavivirus infection; neoplasm; cancer;
                                                                                                                                                                                                                                            Chimeric flaviviruses that are avirulent and immunogenic, useful for vaccinating against a range of dengue viruses.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 4; Length 3391; 76;
                                                                                                                                     Gubler DL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 46; DB 4
Pred. No. 76;
0; Mismatches
                                                                                       (USSH ) US DEPT HEALTH & HUMAN SERVICES.
                                                                                                                                                                                                                                                                                                            Example 3; Page 244-251; 470pp; English.
                                                                                                                                     Butrapet S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADW12582 standard; peptide; 39 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 M1-40/DEN-2 (F36) mutant protein.
      16-FEB-2001; 2001WO-US005142.
                                               16-FEB-2000; 2000US-0182829P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            88.5%;
88.9%;
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                                                                                                                                Kinney RM, ' Kinney CYH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           237 VEŚWILKNP 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Catteau A;
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DEN; dengue; mutant;
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                                                                                                                                                                               2001-497162/54.
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les 8; Conserv
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                                                                                                                                                                                                    N-PSDB; AAD14606
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The present invention relates to novel mutated flaviviruses comprising a phenotype in which the viral genome is modified by introduction of a mutation, singly or in combination, taken from mutations from recombinant virus bearing Vero adaptation mutations, putative Vero cell adaptation mutations of dengue type 4 virus (DEN4) or mutations known to attenuate dengue type 4 virus. The methods and compositions of the invention are useful for fine tuning the attenuation and growth characteristics of dengue virus vaccines for the prevention and/or treatment of dengue virus infection. The present sequence is Dengue virus type 4 strain 2A protein
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New mutated flavivirus, useful for fine tuning the attenuation and growth characteristics of dengue virus vaccines for the prevention and/or treatment of dengue virus infection.
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                                                                                   Attenuation; growth; vaccine; infection; Dengue virus type 4.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Dengue virus (DEN)-2/4-VP1 fusion protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Disclosure; Page 121-122; 246pp; English.
                                                                                                                                                                                                                                                                                                                                                  (USSH ) US DEPT HEALTH & HUMAN SERVICES.
                                          Dengue virus type 4 strain 2A protein.
                                                                                                                                                                                                                                                                                                                                                                                                               Whitehead SS, Murphy BR, Hanley KA;
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                                                                                                                                                                                                                                                            22-MAY-2002; 2002WO-US016308
                                                                                                                                                                                                                                                                                                     22-MAY-2001; 2001US-0293049P.
(first entry)
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Dengue virus; type IV.
Chimeric.
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                                                                                                                                Dengue virus.
  28-MAY-2003
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01-NOV-2001
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RESULT 18 AAE07985

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sific febrile illnesses to severe hemorrhagic manifestations or
                                                             and purified ApoptoM peptide comprises 9 amino acids, useful
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The present invention relates to an isolated and purified ApoptoM peptide. The invention is useful as a vaccine for the prevention and treatment of pathological conditions from non-specific febrile illnesses to severe hemorrhagic manifestations, encephalitic syndromes and these pathological conditions are linked to Plavivirus infection or cancers. The invention is also useful in gene therapy. The present sequence is a M1-40/YF (yellow fever).17D protein.
                                                                                        preventing or treating pathological conditions from non-
illnesses to severe hemorrhagic manifestations or
                                                                                                                                                                                                                                                                           The present invention relates to an isolated and purified ApoptoM peptide. The invention is useful as a vaccine for the prevention and treatment of pathological conditions from non-specific febrile illnesses to severe hemorrhagic manifestations, encophalitic syndromes and these pathological conditions are linked to Plavivirus infection or cancers. The invention is also useful in gene therapy. The present sequence is a M1-40/DEN (dengue)-2 (F36) mutant protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gene therapy, protein purification; virucide; cytostatic; vaccine; hemorrhage; bleeding; infection; flavivirus infection; neoplasm; cancer;
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                                                                                                                                                                                                                       Example 1; SEQ ID NO 29; 30pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADW12577 standard; peptide; 40 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     30-JUN-2003; 2003US-00608029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    82.7%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6; Conservative
                                                                                                                                                         encephalitic syndromes.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       31 IETWFLRHP 39
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Best Local Similarity
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                                                                                                 for
                                                                                                                        specific febrile
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 39 AA;
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specific fehr
                                                                                              a vaccine
                                                             New isolated
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New isolated and purified ApoptoM peptide comprises 9 amino acids, useful as a vaccine for preventing or treating pathological conditions from nonspecific febrile illnesses to severe hemorrhagic manifestations or
                                                                                                                                                                                                                                              Gene therapy; protein purification; virucide; cytostatic; vaccine; hemorrhage; bleeding; infection; flavivirus infection; neoplasm; cancer; DEN; dengue; EGFP; enhanced green fluorescent protein.
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                           Gaps
                                                                                                                                                                                                                          p(95-114) EGFP(M1-M40)DEN-2 (136F) plasmid DNA encoded protein #3.
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9; Length 40;
                           Indels
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Pred. No. 2.4;
3; Mismatches
 OB
            Pred. No. 1.9;
                                                                                                                                                                                                                                                                                                                                                                                                                                     /note= "Encoded by GTTTTC"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Disclosure; SEQ ID NO 35; 30pp; English
                                                                                                                                                                                                                                                                                                                                                                                  'note= "Encoded by GGC"
                                                                                                                                                                                                                                                                                                                                                                                                           /note= "Encoded by GAC"
 Score 43;
                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                               ¥
                                                                                                                                               ADW12588 standard; protein; 48
 82.7%;
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Similarity 66.7%;
6; Conservative
                                                                                                                                                                                                (first entry)
                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     encephalitic syndromes.
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Best Local Similarity
                                                                    : | | : | | :
IERWFVRNP
                                                   1 VESWFLRNP
              Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                         Misc-difference 13
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N-PSDB; ADW12589.
                                                                                                                                                                                                                                                                                                                                                                   Misc-difference
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 48 AA;
                                                                                                                                                                                                                                                                                                      virus
                                                                                                                                                                                                                                                                                                                             Unidentified
                                                                                                                                                                                                24-MAR-2005
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                            .
9
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                                                                                                                                                                       ADW12588;
  Query Match
                                                                                                                                                                                                                                                                                                                    Chimeric
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Matches
                           Matches
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dengue serotype4.rag

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The present invention relates to a method for producing flavivirus-like particles (1) ex vivo, by providing nucleic acids comprising packaging competent retroviral-derived genome, cDNA encoding core proteins from retrovirus, and cDNA encoding a polyprotein comprising flavivirus core protein and flavivirus prhy protein and/or a flavivirus E envelope protein and flavivirus prhy protein and/or a flavivirus E envelope core proteins (ADR8171A). TADR87182). The packaging competent retroviral-derived genome and core proteins are form a retrovirus chosen from murine leukaemia virus (MLW), ALV, respiratory syncytial virus (RSV), MPWV, HIV-cepiratory syncytial virus (RSV), MPWV, HIV-cepiratory syncytial virus (RSV), MPWV, HIV-cepiratory syncytial virus (RSV), MPWV, HIV-cepiratory syncytial virus (RSV), MPWV, HIV-cepiratory syncytial virus (RSV), MPWV, HIV-cepiratory syncytial virus (RSV), MPWV, HIV-cepiratory syncytial virus (RSV), MPWV, HIV-cepiratory core protein and a native flavivirus prM and/or E protein and a native flavivirus prm and/or E protein and a native flavivirus prm and seame flavivirus. The mucleic acid sequence comprising a packaging competent retroviral-derived genome further comprises a transgene. (I) are useful for ex vivo identification of a receptor for flavivirus prm and/or E syloprotein; for ex vivo screening or identification of a receptor for flavivirus prm and core for generated by assembling full-length, unmodified prm and a vector for generated by assembling full-length, unmodified prm and E glycoproteins onto retroviral core proteins derived from murine leukaemia condens from west Nile Virus was generated by inserting a blunt-ended fragment encoding the last 22 residues of flavivirus core (C) and all of prM and E proteins into the BamHI digested and Klenow blunted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Producing flavivirus-like particles for use as a vaccine, comprises transfecting cells with cDNA encoding flavivirus prM and/or E protein, and expressing and allowing structural proteins to form virus-like particles.
                                                                                                                                                                                                                             Virucide; Vaccine; Gene therapy; flavivirus; flavivirus core protein; flavivirus prM protein; flavivirus E protein; envelope glycoprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   (INRM ) INSERM INST NAT SANTE & RECH MEDICALE.
                                                                                                                                                                                                  Yellow Fever Virus deltaCprME, SEQ ID 9.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Example 1; SEQ ID NO 9; 38pp; English.
                                                                                                             ADR87182 standard; protein; 680 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                      03-MAR-2003; 2003EP-00290504.
                                                                                                                                                                                                                                                                                                                                                                                          03-MAR-2003; 2003EP-00290504
                                                                                                                                                                   (first entry)
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40 IETWFLRHP 48
            6
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N-PSDB; ADR87181.
                                                                                                                                                                                                                                                                                     Yellow fever virus.
Synthetic.
          1 VESWFLRNP
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                                                                                                                                                                     18-NOV-2004
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bartosch B,
                                                                                                                                                                                                                                                           deltaCprME
                                                                                                                                         ADR87182;
                                                                                 RESULT 22
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Novel isolated nucleic acid useful as vaccine for preventing flavivirus infection, comprises transcriptional unit encoding signal sequence of one flavivirus and immunogenic flavivirus antigen of a second flavivirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The invention relates to a novel nucleic acid comprising a transcriptional unit encoding a signal sequence of a structural protein of a first flavivirus and an immunogenic flavivirus antigen of a second flavivirus, where the transcriptional unit directs the synthesis of the antigen. The polynucleotide of the invention has virucide activity, and acts as a vaccine. A composition of the invention is useful for immunishing a subject against infection by a flavivirus. The polynucleotide is useful as a vaccine for preventing flavivirus infection. The sequence represents plasmid pCBYF, which contains yellow fever virus prM and E proteins
vector phCMV-G. The present sequence is Yellow Fever Virus deltaCprME protein comprising successively a carboxy terminus of flavivirus core protein, and flavivirus prM and flavivirus E proteins.
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                                                                                                                                                                                                   Gaps
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                                                                                                                                                   Length 680;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Plasmid pCBYF containing yellow fever virus prM and E.
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                                                                                                                                                   Score 43; DB E
Pred. No. 45;
2; Mismatches
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Pred. No. 45;
2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Example 14; Page 147-148; 174pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                       ABP57863 standard; protein; 681 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  82.7%;
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                                                                                                                                                   82.7%;
66.7%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  pCBYF; yellow fever virus
                                                                                                                                           Query Match
Best Local Similarity 66.7
Matches 6; Conservative
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                                                                                                                                                                                                                                                                                               144 IERWFURNP 152
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N-PSDB; ABV77540.
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Best Local Similarity
6; Conserve
                                                                                                                                                                                                                                            1 VESWFLRNP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Yellow fever virus.
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                                                                                                     Sequence 680 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unidentified
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ABP57863;
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yellow fever; attenuation; vaccine.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 26
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The invention relates to a novel nucleic acid comprising a transcriptional unit encoding a signal sequence of a structural protein of a first flavivirus antispen of a second flavivirus antispen of a second flavivirus, where the transcriptional unit directs the synthesis of the antigen. The polynucleotide of the invention has virucide activity, and steps as a vaccine. A composition of the invention is useful for immunising a subject against infection by a flavivirus. The polynucleotide is useful as a vaccine for preventing flavivirus infection. The sequence represents plasmid polspow, which contains Powassan virus prw and E encoding proteins. Note: The protein sequence is not encoded by the CNNA sequence given in ABV77538, which is quoted as the encoding polynucleotide in the specification
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                        Novel isolated nucleic acid useful as vaccine for preventing flavivirus infection, comprises transcriptional unit encoding signal sequence of one flavivirus and immunogenic flavivirus antigen of a second flavivirus.
                                                                                                                             Flavivirus; immunogenic flavivirus antigen; virucide; vaccine; prM-E;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      82.7%; Score 43; DB 6; Length 681; 66.7%; Pred. No. 45; ive 2; Mismatches 1; Indels
                                                                                                         Plasmid pCBPOW containing Powassan virus prM and E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hamster passage 7 yellow fever virus polyprotein.
                                                                                                                                                                                                                                                                                                                                                                                                     Example 15; Page 135-137; 174pp; English
                                                                                                                                                                                                                                                                                           (USSH ) US DEPT HEALTH & HUMAN SERVICES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADJ57394 standard; protein; 3411 AA.
                                         ABP57861 standard; protein; 681 AA.
                                                                                                                                                                                                                                                 04-APR-2002; 2002WO-US010764
                                                                                                                                                                                                                                                                       04-APR-2001; 2001US-00826115
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                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity 66.7
Matches 6; Conservative
                                                                                                                                        pCBPOW; Powassan virus
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145 IERWFVRNP 153
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 681 AA;
                                                                                                                                                                        Powassan virus.
                                                                                                                                                                                                      WO200281754-A1
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                                                                                                                                                                                                                            17-OCT-2002
                                                                                                                                                                                   Chimeric.
                                                                                                                                                                                                                                                                                                                   Chang GJ;
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                                                               ABP57861;
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                   RESULT 24
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ID ADJI
XX
XX
AC ADJI
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DT 06-1
XX
DE Ham
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The present sequence is that of an Asibi/hamster passage 7 yellow fever virus polyprotein. Comparison of this sequence with that of an Asibi/hamster passage 0 virus revealed 7 amino acid substitutions: in the envelope protein, His replaces Gln-27, Gly replaces Asp-28, Ala replaces Hap-155, Arg replaces Thr-48; and hrg replaces Lys-31; in the NG2A protein, Ala replaces Thr-48; and in the NS4B protein, Ile replaces Val-98. A claimed isolated mucleic acid encodes a yellow fever virus with a viral genome that comprises an altered mucleic acid sequence resulting in at least 1, and optionally up to all 7, of these amino acid substitutions. The virus is used in a vaccine composition. The methods and compositions of the invention provide for improvement of the reversion frequency of an attended yellow fever virus for use in safer vaccines in which the risk of disease is reduced or eliminated.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New isolated nucleic acid encoding a Yellow Fever virus and having alterations of at least two nucleotides, useful in the fields of molecular biology and virology, particularly for producing an improved
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WNV; PrM protein; E protein; polyprotein; envelope; membrane; vaccine.
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                                                                                                    286. .778
/label= Envelope_protein
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                                                          Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                      19-JUL-2002; 2002US-0397440P.
                                                                                                                                                                                                                                                                                                                                     11-JUL-2003; 2003WO-US022001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Yellow Fever virus vaccine.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Barrett A, Mcarthur M;
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242 IERWFVRNP 250
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Best Local Similarity
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Yellow fever virus.
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                                                                                                                                                                                                     WO2004009764-A2
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                                                                                                                                                                                                                                                                      29-JAN-2004
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                                                                                                           Region
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2 ESWFLRNP
  N-PSDB; ADW00901
                                                                                                                                                                                                                 Seguence 668 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          West Nile virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO2004076619-A2
                                                                                                                                                                                                                                                                                                                                                                                         02-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10-SEP-2004
                                                                                                                                                                                                                                                                                                                                                                      ADS76177;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tangy F,
                                                                                                                                                                                                                                                                                                                                                                                                                                                      antigen.
                                                                                                                                                                                                                                                                                                                               RESULT 28
                                                                                                                                                                                                                                                                                                                                         ADS76177
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                                                                                                                              Isolated immunogenic composition useful for immunizing animal against whest Nile Virus WNV, comprises single or complex of WNV PrM/E heterodimer consisting of recombinant WNV PrM polypeptide and recombinant WNV E polypeptide.
                                                                                                                                                                                                 The specification describes an immunogenic composition which comprises a complex of West Nile Virus (WNV) PrM/B heterodimer or a single WNV PrM/E heterodimer or a single WNV PrM/E heterodimer consisting of a recombinant WNV PrM Polypeptide and a recombinant WNV B polypeptide. The immunogenic composition of the invention is useful for immunizing an animal against the WNV. It is also seguence represents a WNV antibodies in a biological sample. The present sequence represents a WNV PrM region. The WNV polyprotean is proteolytically processed by the viral serine protease NS2B-NS3 and various callular proteases into 10 mature viral proteins, in the order: NS2A-NS2B-NS3-NS4A-NS4B-NS5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WNV; PrM protein; E protein; polyprotein; envelope; membrane; vaccine.
                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                     Harrington C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Harrington C;
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                                                                                                                                                                                                                                                                                                                                                  9; Length 167;
                                                                                                                                                                                                                                                                                                                                                                      1; Indels
                                                                     Choo Q, Coates SR, Coit D, Medina-Selby A, Pichuantes S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Choo Q, Coates SR, Coit D, Medina-Selby A, Pichuantes S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Amino acid sequence of synthetic WNV Prm/E region.
                                                                                                                                                                                                                                                                                                                                                 Score 42; DB 9
Pred. No. 14;
0; Mismatches
                                                                                                                                                                                 Disclosure; SEQ ID NO 9; 130pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADW00902 standard; protein; 668 AA.
21-MAY-2004; 2004WO-US015976.
                    23-MAY-2003; 2003US-0473225P, 11-DEC-2003; 2003US-0529171P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           23-MAY-2003; 2003US-0473225P.
11-DEC-2003; 2003US-0529171P.
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87.5%;
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Best Local Similarity 87.5
Matches 7; Conservative
                                                                    Chien DY,
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Hilt S, Houghton M,
                                                                                                                                                                                                                                                                                                                                                                                                           125 ESWILRNP 132
                                                                             Houghton M,
                                                                                                WPI; 2005-075046/08.
                                                CHIR ) CHIRON CORP
                                                                                                                                                                                                                                                                                                                                                                                        2 ESWFLRNP 9
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                                                                                                            N-PSDB; ADW00904
                                                                                                                                                                                                                                                                                                                              Sequence 167 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 West Nile virus.
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                                                                     Andrews W,
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                                                                              Hilt S,
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Isolated immunogenic composition useful for immunizing animal against West Nile Virus WNV, comprises single or complex of WNV PrM/E heterodimer consisting of recombinant WNV PrM polypeptide and recombinant WNV E
                                                                                                                                                                                                                      The specification describes an immunogenic composition which comprises a complex of West Nile Virus (WNV) PrM/E heterodimer or a single WNV PrM/E heterodimer or a single WNV PrM/E heterodimer consisting of a recombinant WNV PrM polypeptide and a recombinant WNV E polypeptide. The immunogenic composition of the invention is useful for immunisting an animal against the WNV. It is also useful for detecting WNV antibodies in a biological sample. The present sequence represents a synthetic PrM/E region of WNV. The WNV polyprotein is proteolytically processed by the viral serine processe NS2B-NS3 and various cellular processes into 10 mature viral proteins, in the order:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This sequence represents the heterodimer glycoprotein, PreM-E, from West-
Nile virus. This protein was used as an antigen to raise a purified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New purified polypeptide derived from a West-Nile or Dengue virus antigen, useful in preparing a vaccine for diagnosing, treating and/or preventing West-Nile or Dengue viral infections.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          secreted envelope protein; heterodimer glycoprotein; PreM-E; NS-1 protein; West-Nile virus; measles virus; vaccine; Dengue virus;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 668;
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67;
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Pred. No. 67;
0; Mismatches
                                                                                                                                                               Example 2; SEQ ID NO 6; 130pp; English
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(CNRS ) CNRS CENT NAT RECH SCI.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NS2A-NS2B-NS3-NS4A-NS4B-NS5
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Best Local Similarity
7; Conserve
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N-PSDB; ADS76173.
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Length 692

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polyclonal or monoclonal antibody. The cDNA encoding this protein may be used in the generation of a measles virus which may be used in a pharmaceutical composition, or in the production of a recombinant virus for the preparation of an anti-West-Nile virus vaccine or an anti-Dengue virus vaccine. The polynuclectide sequences of the invention are useful for detecting the presence or absence of a West-Nile or Dengue virus antigen in a biological sample. The pharmaceutical composition is an anti-West-Nile or Dengue virus agent in the preparation of an anti-West-Nile or Dengue virus vaccine. They can also be used in diagnosing and preventing West-Nile or Dengue viral infections.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Flavivirus; immunogenic flavivirus antigen; virucide; vaccine; prM-E_j pCBWN; West nile virus.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 42; DB 8; Length 691;
Pred. No. 70;
0; Mismatches 1; Indels
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                                                                                                                                                                                                                                                                                                                                                                                             Sequence 691 AA;
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Chimeric.
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Seguence 692 AA;

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                               Gaps
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                             1; Indels
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Pred. No. 70;
1; Mismatches
Score 42; DB 6
Pred. No. 70;
0; Mismatches
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                                                                                                                                                                                                                                                                                                                                               St. Louis encephalitis virus.
Chimeric.
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   80.8%;
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Similarity 77.8%;
7; Conservative
                                                                                                                                                                                                                             (first entry)
 Query Match 80.8
Best Local Similarity 87.5
Matches 7; Conservative
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R; Trent, D.W.; Kinney, R.M.; Johnson, B.J.B.; Vorndam, A.V.; Grant, J.A.; Deubel, V.; Ric Virology 156, 293-304, 1987

A; Title: Partial nucleotide sequence of St. Louis encephalitis virus RNA: structural prot A; Reference number: A27531

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F; 110, Pproduct: capsid protein R #status predicted cEPP>
F; 214-288 / Domain: transmembrane #status predicted cTMA>
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F;1369-1499/Product: nonstructural protein NS2b #status predicted <NSB>
F;1500-1525/Product: nonstructural protein NS3 #status predicted <NS3>
F;156,269,442,602,919,964,996,1189/Binding site: carbohydrate (Asn) (covalent) #status pr
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N;Contains: capsid protein C; envelope protein M; major envelope protein E; nonstructural protein NS44; nonstructural protein NS44; nonstructural protein NS5
C;Species: yellow fever virus
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A;Tille: Nucleotide sequence of yellow fever virus: implications for flavivirus gene exp. A;Reference number: A03914; MUID:85272570; PMID:4023707
A;Reference number: A03914
F;1474-2091/Product: nonstructural protein NS3 #status predicted <NS3>
F;166-1673/Region: nucleotide-binding motif A (P-loop)
F;175-1758/Region: nucleotide-binding motif B
F;1757-1766/Region: DEAH motif
F;202-2374/Product: nonstructural protein NS4a #status predicted <NV4>
F;2757-2466/Product: nonstructural protein NS4b #status predicted <NV4>
F;2487-3386/Product: nonstructural protein NS4b #status predicted <NV5>
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Cipece: 13.1-Mar-1999 #Requence are violated by the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the c
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A; Mesidues: 1-773 «KAM»

A; Residues: 1-773 «KAM»

A; Residues: 1-773 «KAM»

A; Cross-references: UNIPROT: Q86654; UNIPARC: UPI00000F8175; GB: S66064; NID: g432575; PIDN: A; Experimental source: H241-P

A; Experimental source: H241-P

A; Note: sequence extracted from NCBI backbone (NCBIN:138430, NCBIP:138431)

C; Superfamily: hepatitis C virus genome polyprotein

C; Keywords: glycoprotein; polyprotein
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N;Contains: capsid protein; envelope protein; membrane protein; nonstructural protein
nonstructural protein NS4a; nonstructural protein NS4b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                              Bructural polyprotein - dengue virus type 4 (fragment)
N;Contains: capsid protein; envelope glycoprotein; membrane protein precursor C;Species: dengue virus type 4
C;Date: 07-Apr-1994 #sequence_revision 18-Nov-1994 #text_change 31-Dec-2004
C;Accession: A47666
R;Kawano, H;Rostapshov, V;Rosen, L.; Lai, C.J.
J, Virol. 67, 657-6575, 1991
A;Title: Genetic determinants of dengue type 4 virus neurovirulence for mice.
A;Reference number: A47666; MUID:94016840; PMID:8411360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Mismatches
                                   ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity 88.5
Matches 8; Conservative
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236 VESWILRNP 244
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A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
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F;134,150,172,594,908,986,1796,2062,2320,2346,2408,2467,2720,2734,2740/Binding site: car
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                                                                                                                                                                                            Conservative
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242 IERWFVRNP 250
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                                                                Query Match
Best Local Similarity
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Best Local Similarity
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NOOMtains: capsid protein C; envelope protein M; major envelope protein E; nonstructural

NyContains: capsid protein C; envelope protein M; major envelope protein NS5

C;Species; yallow fever virus

C;Species; yallow fever virus

C;Date: 31-Mar-1991 #sequence_revision 31-Mar-1991 #text_change 31-Dec-2004

C;Accession: 807757

Nucleic Acids Res. 17, 3999, 1989

Nucleic Acids Res. 17, 3999, 1989

Nucleic Acids Res. 17, 3999, 1989

A;Status: nucleic acid sequence comparison of the genome of two 17D-204 yellow fever vaccir

A;Accession: 807757; MUID:89282413; PMID:2734112

A;Residues: 1-341 L OUDP.

A;Residues: 1-341 L OUDP.

A;Residues: 1-341 L OUDP.

A;Residues: 1-341 L OUDP.

A;Cocas-references: UNIPROT:P19901; UNIPARC:UPI0000131EB3; EMBL:X15062; NID:962289; PIDX

A;Cocas-references: UNIPROT:P19901; UNIPARC:UPI0000131EB3; EMBL:X15062; NID:962289; PIDX

A;Cocas-references: UNIPROT:P19901; UNIPARC:UPI0000131EB3; EMBL:X15062; NID:962289; PIDX

A;Cocas-references: UNIPROT:P19901; UNIPARC:UPI0000131EB3; EMBL:X15062; NID:962289; PIDX

A;Cocas-references: UNIPROT:P19901; UNIPARC:UPI0000131EB3; EMBL:X15062; NID:962289; PIDX

A;Cocas-references: UNIPROT:P19901; UNIPARC:UPI0000131EB3; EMBL:X15062; NID:962289; PIDX

A;Cocas-references: UNIPROT:P19901; UNIPARC:UPI0000131EB3; EMBL:X15062; NID:962289; PIDX

A;Cocas-references: UNIPROT:P19901; UNIPARC:UPI000131EB3; EMBL:X15062; NID:962289; PIDX

A;Cocas-references: UNIPROT:P19901; UNIPARC:UPI000131EB3; EMBL:X15062; NID:962289; PIDX

A;Cocas-references: UNIPROT:P19901; UNIPARC:UPI000131EB3; EMBL:X15062; NID:962289; PIDX

C;Keywords: ATP; capsid protein M #status predicted <MES-

F;105-125/Domain: transmembrane #status predicted <TM4->

F;718-137/Product: monstructural protein NS1 #status predicted <MES-

F;118-1137/Product: monstructural protein NS2 #status predicted <MS2-

F;118-1137/Product: monstructural protein NS2 #status predicted <MS2-

F;148-2-107/Product: monstructural protein NS3 #status predicted <MS3-

F;185-147Residue: m
A; Molecule type: genomic RNA
A; Residues: 1-3411 «RIC»
A; Cross-references: UNIPROT: P03314; UNIPARC: UP10000131E82; GB: X03700; GB: K02749; NID: g55
C; Superfamily: hepatitis C virus genome polyprotein
C; Keywords: ATP; capsid protein; envelope protein; glycoprotein; nonstructural protein;
F; 2-10-20 Froduct: appsid protein M #status predicted «CPC»
F; 211-285/Product: envelope protein M #status predicted «PM»
F; 249-269/Domain: transmembrane #status predicted «TM2»
F; 240-269/Domain: transmembrane #status predicted «TM3»
F; 240-786/Product: major envelope protein E #status predicted «MEE»
F; 740-753/Domain: transmembrane #status predicted «TM3»
F; 750-779/Domain: transmembrane #status predicted «TM3»
F; 750-779/Domain: transmembrane #status predicted «TM3»
F; 750-1180/Product: nonstructural protein NS1 #status predicted «NS1»
F; 1189-1180/Domain: transmembrane #status predicted «TM3»
F; 1189-1180/Domain: transmembrane #status predicted «TM3»
F; 1485-2107/Product: nonstructural protein NS2 #status predicted «NS2»
F; 1485-2107/Product: nonstructural protein NS3 #status predicted «NS3»
F; 1682-1689/Region: nucleotide-binding motif A (P-loop)
F; 170-1120/Product: nonstructural protein NS3 #status predicted «NS3»
F; 1682-1689/Region: nucleotide-binding motif B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     F;2108-2394/Product: nonstructural protein NS4a #status predicted <N4A>
F;2395-2506/Product: nonstructural protein NS4b #status predicted <N4B>
F;2507-3411/Product: nonstructural protein NS5 #status predicted <NS5>
F;134,150,172,266,594,755,908,986,1796,2062,2320,2346,2408,2467,2720,2734,2740/Binding
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Best Local Similarity 66.,
اتام 6; Conservative
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242 IERWFVRNP 250
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R;Castle, E.; Leidner, U.; Nowak, T.; Wengler, G.; Wengler, G.
Yrtology 149, 10-26, 1986
A;Title: Primary structure of the West Nile flavivirus genome region coding for all nons
A;Reference number: A25256; MUID:86124703; PMID:3753811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Residues: 1-3430 c.CAS.

A; Residues: 1-3430 c.CAS.

A; Residues: 1-3430 c.CAS.

A; Residues: 1-3430 c.CAS.

A; Cross-references: UNIPROT:P06935; UNIPARC:UPI0000131E81; GB:M10103; GB:M12294; NID:g33

A; Cross-references: UNIPROT:P06935; UNIPARC:UPI0000131E81; GB:M10103; GB:M12294; NID:g33

A; Cross-references: UNIPROT:P06935; UNIPARC:UPI0000131E81; GB:M10103; GB:M12294; NID:g33

A; Note: parts of this sequence, including the mature proteins, were de C; Superfamily: hepatitis C virus genome polyprotein

C; KGPWords: ATP; core protein; Glycoprotein; membrane-associated glycoprotein PN2 predicted c.CVS.

F; 105-123/Domain: nonterminal signal sequence #status predicted c.NVS.

F; 116-233/Product: membrane-associated glycoprotein NV2 #status predicted c.NVS.

F; 275-290/Domain: nonterminal signal sequence #status predicted c.NVS.

F; 275-290/Domain: nonterminal signal sequence #status predicted c.NVS.

F; 291-787/Product: membrane-associated glycoprotein V3 #status predicted c.NVS.

F; 291-787/Product: nonstructural protein NV4 #status predicted c.NV4.

F; 1695-1702/Region: nucleotide-binding motif A (P-loop)

F; 1782-1787/Region: nucleotide-binding motif B

F; 170-710-7102/Product: membrane-associated glycoprotein V3 #status predicted c.NV4.
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F;138,917,962,994,1289,1659,1966,2336,2459,2489,2573,2739,2759,2864,2902/Binding site: c
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in NS4a; nonstructural protein NS4b; nonstructural protein NS5
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J. Gen. Virol. 69, 1-21, 1988
A;Title: Nucleotide and complete amino acid sequences of Kunjin virus: definitive gene on
A;Reference number: A28697; MUID:88089524; PMID:2826659
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A;Residues: 1-3433 <COI>
A;Cross-references: UNIPROT:P14335; UNIPARC:UP10000131E43; GB:D00246; NID:g221966; PIDN:F
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C;Keywords: ATP; capsid protein; envelope protein; membrane protein; nonstructural prote:
F;2-123/Product: capsid protein C #status predicted <CPC>
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C;Date: 30-Sep-1987 #sequence_revision 30-Sep-1987 #text_change 31-Dec-2004
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C.Date: 30-Sep-1989 #sequence_revision 30-Sep-1989 #text_change 31-Dec-2004
                                                                                                           Gaps
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0
          Length 3411;
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82.7%; Score 43; DB 1; 66.7%; Pred. No. 32;
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Pred. No. 48;
0; Mismatches
                                                                                                 2; Mismatches
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A;Cross-references: UNIPROT:028640; UNIPARC:UP10000056C3B; GB:AE000989; GB:AE000782; NID:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    75.0%;
55.6%;
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Matches 5, Conservative
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Best Local Similarity 55.6
Matches 5; Conservative
                                                                                                               6; Conservative
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285 QKWFIRNP 292
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161 SWFLQNP 167
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                                                                                  Best Local Similarity
Matches 6; Conserv
                                                                                                                                                            3 SWFLRNP 9
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A;Molecule type: DNA
A;Residues: 1-582 <STO>
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A;Map position: 2
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                                                             Query Match
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H69453
hypothetical protein AF1633 - Archaeoglobus fulgidus
C;Species: Archaeoglobus fulgidus
C;Species: Archaeoglobus fulgidus
C;Species: Archaeoglobus fulgidus
C;Species: O5-Dec-1997 #sequence_revision 05-Dec-1997 #text_change 09-Jul-2004
C;Accession: H69453
R;Klenk, H.P.; Clayton, R.A.; Tomb, J.F.; White, O.; Nelson, K.E.; Ketchum, K.A.; Dodson
R;Klenk, H.P.; Clayton, R.D.; Quackenbush, J.; Lee, N.H.; Sutton, G.G.; Gill, S.; Kirkness, E.F.
Glodek, A.; Zhou, L.; Overbeek, R.; Gocayne, J.D.; Weidman, J.P.; McDonald, L.
Nature 390, 364-370, 1997
A;Authors: Utterback, T.; Cotton, M.D.; Spriggs, T.; Artiach, P.; Kaine, B.P.; Sykes, S.
Smith, H.O.; Woese, C.R.; Venter, J.C.
A;Authors: Utterback, T.; Cotton, M.D.; Spriggs, T.; Artiach, P.; Kaine, B.P.; Sykes, S.
Smith, H.O.; Woese, C.R.; Venter, J.C.
A;Authors: Utterback, T.; Gordon, M.D.; Spriggs, T.; Artiach, P.; Kaine, B.P.; Sykes, S.
A;Attle: The complete genome sequence of the hyperthermophilic, sulfate-reducing archaec
A;Reference number: A69250; MUID:98049343; PMID:9389475
A;Accession: H69453
A;Accession: H69453
A;Accession: H69453
A;Accession: H69453
A;Residues: 1-227 <KLE>
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                               Filst-215/Domain: noncerminal signal sequence #status predicted <81G>
Filst-215/Domain: noncerminal signal sequence #status predicted <8NG>
Filst-290/Product: membrane protein M #status predicted <NEPS>
Filst-191/Product: membrane protein MS1 #status predicted <NEPS>
Filst-1143/Product: nonstructural protein NS1 #status predicted <NS2>
Filst-1505/Product: nonstructural protein NS2 #status predicted <NS2>
Filst-1505/Product: nonstructural protein NS2 #status predicted <NS2>
Filst-1706/Region: nucleotide-binding motif A (P-loop)
Filst-1706/Region: nucleotide-binding motif B (P-loop)
                                                                                                                                                                                                                                                                                      F;2125-2273/Product: nonstructural protein NS4a #status predicted <N4A>F;2274-2528/Product: nonstructural protein NS4b #status predicted <N4B>F;2529-3433/Product: nonstructural protein NS5 #status predicted <NS5>
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                  F;124-290/Product: membrane protein M precursor #status predicted
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Pred. No. 48;
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Pred. No. 2;
1; Mismatches
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Local Similarity 85.7%;
les 6; Conservative 1
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                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 87.5
Matches 7; Conservative
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SWFVRNP 39
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Doctulinum neurotoxin type B hemagglutinin component, 33K - Clostridium botulinum (strain N;Alternate names: protein HA-33
C;Species: Clostridium botulinum
A;Variety: strain Eklund 17B
C;Accession: S58857
K;Accession: S58857
A;Title: Cloning and sequencing of a hemagglutinin component of the botulinum neurotoxin A;Reference number: S58855
A;Molecule type: DNA
A;Residues: 1-292 < EAS>A;Accession: S5885
A;Cossion: S5885
A;Molecule type: DNA
A;Residues: 1-292 < EAS>A;Accession: S5885
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A;Accession: F84807
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75.0%; Score 39; DB 2; Length 227;
85.7%; Pred. No. 9.8;
ive 1; Mismatches 0; Indels
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A;Cross-references: UNIPARC:UP1000006B767; EMBL:X89633; NID:g1279694; PIDN:CAA61785.1; P
A;Note: the nucleotide sequence was submitted to the EMBL Data Library, June 1995
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1-aminocyclopropane-1-carboxylate synthase (EC 4.4.1.14) T28119.50 - Arabidopsis thalian
N/Alternate names: protein T28119.50
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A;Cross-references: UNIPROT:Q9T065; UNIPARC:UP100000A09EF; EMBL:AL035709; GSPDB:GN0062;
A;Experimental source: cultivar Columbia; BAC clone T28119
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A;Introns: 49/3; 93/3; 147/2
C;Superfamily: 1-aminocyclopropane-1-carboxylate synthase
C;Keywords: carbon-sulfur lyase; ethylene biosynthasis; phosphoprotein; pyridoxal phosph.
F;272/Binding site: pyridoxal phosphate (Lys) (covalent) #status predicted
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Modecule type: mRNA
A;Residues: 1-470 <LLA>
A;Cross-references: UNIPROT:Q37001; UNIPROT:Q49537; UNIPARC:UPI00009968D; EMBL:L29261; A
A;Cross-references: UNIPROT:Q37001; UNIPROT:O49537; UNIPARC:UPI00009968D; EMBL:L29261; A
A;Revan, W.; Brandd, P.; Dose, S.; Jarke, D.; Scharfe, M.; Schon, O.; Bancroft, I.; Mewes
Bubmitted to the Protein Sequence Database, April 1998
A;Reference number: Z15456
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C;Species: Arabidopsis thaliana (mouse-ear cress)
C;Date: 28-Oct-1996 #sequence revision 27-Feb-1997 #text_change 09-Jul-2004
C;Accession: S71174; T05890; H46376
C;Accession: N.P; Theologis, A.
Submitted to the EMBL Data Library, February 1996
A;Description: Li+ regulated 1-aminocyclopropane-1-carboxylate synthase gene expression
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A;Molecule type: DNA
Assaidues: 1-470 <BEV>
A;Cross-references: UNIPARC:UP1000009968D; EMBL:AL021684; GSPDB:GN00063; ATSP:F6H11.90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C;Species: Arabidopsis thaliana (mouse-ear cress)
C;Date: 30.Apr-1999 #sequence_revision 30-Apr-1999 #text_change 09-Jul-2004
Accession: T06024
R;Bevan, M.; Van Der Schueren, J.; Chuang, Y.J.; Voet, M.; Robben, J.; Volckaert, submitted to the Protein Sequence Database, March 1999
A;Reference number: 215484
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C,Superfamily: uncharacterized conserved protein
                                                                                                                                                                                                                                                                            Query Match . 71.2%; Score 37; DB Best Local Similarity 66.7%; Pred. No. 27; Matches 6; Conservative 0; Mismatches
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                                                                                                                             A;Cross-references: SGD:S0005806
A;Map position: 15R
A;Note: YOR280c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 71.2
Best Local Similarity 55.6
Matches 5; Conservative
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55 IESWLAKNP 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                          76 VYGWFFRNP 84
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                                                                                                                                                                                                                                                                                                                                                                                                1 VESWFLRNP
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                  A;Residues: 1-266 <CHW>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Gene: ATSP: T28119.50
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A,Molecule type: DNA
A,Molecule type: DNA
A,Experimental source: strain S288C
A,Experimental source: strain S288C
R,Cheret, G.; Bernardi, A.; Sor, F.
Yeast 12, 1059-1064, 1996
A,Title: DNA sequence analysis of the VPHI-SNF2 region on chromosome XV of Saccharomyces
A,Reference number: S72039; MUID:97051594; PMID:8896271
C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 15-Oct-1999
C;Accession: T2953
E;Bradahaw, H.; Stellyes, L.
Submitted to the EMBL Data Library, June 1996
A;Description: The sequence of C. elegans cosmid T12E12.
A;Reference number: Z20641
A;Accession: T29563
A;Accession: T29563
A;Accession: T29563
A;Kesidues: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-94 <br/>A;Access: UNPARC:UPI00001641F8; EMBL:U61944; PIDN:AAB03122.1; GSPDB:GN00022; C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Cross-references: UNIPROT:Q66346; UNIPARC:UP100000F6DD9; EMBL:X72849; NID:g437772; PID
C;Superfamily: hepatitis C virus genome polyprotein
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S40144
S40144
Deremembrane protein - dengue virus type 2
C;Specises: dengue virus type 2
C;Date: 06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change 31-Dec-2004
C;Accession: $40144
S;Shiu, S.Y.W.
Submitted to the EMBL Data Library, May 1993
A;Reference number: $40144
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hypothetical protein YOR280c - yeast (Saccharomyces cerevisiae)
hypothetical protein O5471
hypothetical saccharomyces cerevisiae
c;Species: Saccharomyces cerevisiae
c;Date: 12-Jul-1996 #sequence_revision 12-Jul-1996 #text_change 31-Dec-2004
c;Accession: S67182, S72050
h;Cheret, G; Sor, F.
submitted to the Protein Sequence Database, July 1996
h;Reference number: S67169
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Best Local Similarity 85.7
Matches 6; Conservative
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123 IETWILRHP 131
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88 KSWFLRN 94
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A,Molecule type: mRNA
A,Residues: 1-166 <SHI>
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Matches 5; Conserv
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A,Map position: 4
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Gaps

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A Accession: $25002
A Molecule type: mRNA
A;Residues: 1-484 <br/>A;Residues: 1-484 <br/>A;Cross-references: UNIPROT:P31531; UNIPARC:UP10000124E35; EMBL:X67100; NID:g18557; PIDN:<br/>C;Superfamily: 1-aminocyclopropane-1-carboxylate synthase<br/>C;Reywords: carbon-sulfur lyase; ethylene biosynthesis; phosphoprotein; pyridoxal phosphe<br/>F;279/Binding site: pyridoxal phosphate (Lys) (covalent) #status predicted
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C;Species: Vigna radiata (mung bean)
C;Species: Vigna radiata (mung bean)
C;Species: Vigna radiata (mung bean)
C;Species: Vigna radiata (mung bean)
C;Species: Vigna radiata (mung bean)
C;Species: Vigna radiata; S20219
R;Botella, J.R.; Arteca, J.M.; Schlagnhaufer, C.D.; Arteca, R.N.; Phillips, A.T.
Plant Mol. Biol. 20, 425-436, 1992
A;Title: Identification and characterization of a full-length cDNA encoding for an auxin-
of its mRNA in response to indole-3-acetic acid.
A;Reference number: S26213; MUID:93043033; PMID:1421146
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A;Note: the nucleotide sequence was submitted to the EMBL Data Library, January 1992
R;Botella, J.R.; Schlagnhaufer, C.D.; Arteca, R.N.; Phillips, A.T.
Plant No. 1 18, 793-797, 1992
A;Title: Identification and characterization of three putative genes for 1-aminocycloprogrammer. S20919; MUID:92216056; PMID:1558953
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A;Residues: 27-94 KBCF.
A;Cross-references: UNIPARC:UPI00000A4C08; GB:M80554; NID:g170628; PIDN:AAA53297.1; PID:c
A;Experimental source: Rwilcz cv. Berken, etiolated hypocotyls; clone pMAC-1
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A;Residues: 1-848 -ROT-
A;Cross-references: UNIPROT:043858; UNIPARC:UPI00000A0DAC; EMBL:211613; NID:G22069; PIDN
A;Experimental_source: clone pAIM-1
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A,Status: nucleic acid sequence not shown; translation not shown
A,Molecule type: mRNA
A,Molecule type: mRNA
A,Residues: 50-415,'P',417 <BOW>
A,Cross-references: UNIPARC:UPI0000124E34; EMBL:Z11562; NID:g22067; PIDN:CAA77655.1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C;Species: Glycine max (soybean)
C;Date: 22-Nov-1993 #sequence_revision 10-Nov-1995 #text_change 09-Jul-2004
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A;Experimental source: strain O157:H7, substrain EDL933
                                                                                                                                                                                                                                  0; Mismatches
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                                                                                                                                                   Score 37;
Pred. No.
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Pred. No.
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les 6; Conservative
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Best Local Similarity
Matches 6; Conserv
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                                         C;Genetics:
A;Gene: Z4317
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A, Experimental source: cultivar Columbia, BAC clone F6H11
Filang, X.; Abell, S.; Reller, N.F.; Shen, N.F.; Theologis, A.
Proc. Natl. Acad. Sci. U.S.A. 89, 11046-11050, 1992
A, Title: The 1-aminocyclopropane-1-carboxylate synthase gene family of Arabidopsis thali
A, Reference number: A46376; MUID:93066381; PMID:1438312
A, Accession: H46376
A, Status; preliminary; not compared with conceptual translation
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H91109
hypothetical protein EC83848 [imported] - Escherichia coli (strain 0157:H7, substrain RI
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A;Experimental source: strain O157:H7, substrain RIMD 0509952
C;Genetics:
A;Gene: EC93848
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(Superfemally: 1-aminocyclopropane-1-carboxylate synthase
C;Keywords: carbon-sulfur lyase; ethylene biosynthesis; phosphoprotein; pyridoxal phosph
P;272/Binding site: pyridoxal phosphate (Lys) (covalent) #status predicted
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C;Date: 18-Jul-2001 #sequence_revision 18-Jul-2001 #text_change 09-Jul-2004
C;Accession: H9Jul-2001 #sequence_revision 18-Jul-2001 #text_change 09-Jul-2004
R;Hayashi, T.; Makino, K.; Ohnishi, M.; Kurokawa, K.; Ishii, K.; Yokoyama, K.; Han, Ogasawara, N.; Yasunaga, T.; Kuhara, S.; Shiba, T.; Hattori, M.; Shinagawa, H.
DNA Res B, 1.1-22, 2001
A;Reference number: A99629; MUID:21156231; PMID:11258796
A;Accession: H91109
A;Status: preliminary
A;Residues: 1-482 <HAX>
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85.7%; Pred. No. 50;
ive 0; Mismatches 1; Indels
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Pred. No. 49;
2; Mismatches
                                                                                                                                                                                                                                                                                   A;Molecule type: nucleic acid
A;Residues: 50-81 <LIW>
A;Cross-references: UNIPARC:UPI0000A1204
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                                                                                                                                                                                                                                                                                                                                                                                                                                           C,Genetics:
A,Gene: ATSP:F6H11.90; ACS5; ACC5
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Matches 6; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 VESWFLRNP 9
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Best Local Similarity
Matches 5; Conserv
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Indels

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A,Cross-references: UNIPROT:Q82865; UNIPARC:UPI00000F3E2D; EMBL:U03693; NID:g517403; PID:
C;Superfamily: hepatitis C virus genome polyprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N; Contains: amino end of nonstructural protein NSI; capsid protein C; envelope protein M C; Species: yellow fever virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C;Accession: JU0374
R;Ballinger-Crabtree, M.B.; Miller, B.R.
A;Gen. Virol. 71, 2115-2121, 1990
A;Title: Partial nucleotide sequence of South American yellow fever virus strain 1899/81
A;Reference number: JU0374; MUID:91011358; PMID:2145394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cisuperfamily: hepatitis C virus genome polyprotein
Cisuperfamily: hepatitis C virus genome polyprotein
Cisuperfamily: hepatitis C virus genome polyprotein
Cisuperfamily: hepatitis C virus genome polyprotein; glycoprotein; nonstructural protein; nucle
Cisuperfamily: hepatitis C #status predicted <APP>
Filo-122/Bonain: transmembrane #status predicted <APP>
Filo-285/Product: envelope protein M #status predicted <PRM>
Filo-285/Product: envelope protein B #status predicted <APM>
Filo-285/Product: major envelope protein E #status predicted <APP>
Filo-287/Bomain: transmembrane #status predicted <APM>
Filo-287/Bomain: transmembrane #status predicted <APM>
Filo-287/Bomain: transmembrane #status predicted <APM>
Filo-388-1078/Bomain: transmembrane #status predicted <APM>
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N.Contains: capsid protein, envelope protein; membrane protein; nonstructural protein NS
a; nonstructural protein NS4b; nonstructural protein NS5
C;Species: dengue virus type 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Residues: 1-1163 <BAL>
A;Cross-references: UNIPROT:P29165; UNIPARC:UPI0000131E84; GB:D14458; GB:D00739; NID:922
                                                                                                                                                                                               C;Species: Japanese encephalitis virus
C;Accession: 150804
R;Ni, H.; Barrett, A.D.
J. Gan. Virtol. 76, 401-407, 1995
A;Hile: Nucleotide and deduced amino acid sequence of the structural protein A;Reference number: 150804; WUID:95146981; PMID:7844559
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                genome polyprotein - yellow fever virus (strain 1899/81) (fragment)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A,Accession: 150804
A,Status: predlminary; translated from GB/EMBL/DDBJ
A,Molecule type: mRNA
A,Residues: 1-789 <NIX>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 37; DB 2;
Pred. No. 84;
2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                71.2%;
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Best Local Similarity 62.5
The 5; Conservative
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242 IERWLVRNP 250
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ENWIIRNP 259
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nes 5; Conserv
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N;Contains: envelope protein E; membrane-associated protein M; nonstructural protein NS1
C;Species: dengue virus type 2
C;Species: dengue virus type 2
C;Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 31-Dec-2004
C;Accession: JQ1404
S;Shiu, S;Y,W,; Jang, W.R.; Porterfield, J.S.; Gould, E.A.
J;Gen. Virol. 73, 207-212, 1992
A;Title: Envelope protein sequences of dengue virus isolates TH-36 and TH-Sman, and iden
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: genomic RNA
A; Residues: 1-555 <SHI>
A; Residues: 1-555 <SHI>
A; Residues: 1-555 <SHI>
A; Cross-references: UNIPROT: P29984; UNIPARC: UPI0000131DF8; GB: D10514; DDBJ: D01074; NID: g
C; Superfamily: hepatitis C virus genome polyprotein
C; Keywords: envelope protein; glycoprotein; nonstructural protein; polyprotein; transment
F; 1-49/Product: membrane-associated protein M (fragment) #status predicted <MEM>
F; 50-54/Product: envelope protein E #status predicted <ENV>
F; 50-54/Product: envelope protein E #status predicted <ENV>
F; 496-512/Domain: transmembrane #status predicted <ENV>
F; 52-542/Domain: transmembrane #status predicted <ENV>
F; 52-542/Domain: transmembrane #status predicted <ENV>
F; 52-542/Domain: transmembrane #status predicted <ENV>
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polyprotein - dengue virus type 2 (strain Mexican) (fragment)

C;Species: dengue virus type 2

C;Species: dengue virus type 2

C;Species: dengue virus type 2

C;Species: dengue virus type 2

C;Species: dengue virus type 2

C;Accession: A48644

R;Ruiz, B.H.; Sanchez, I.; Ortega, G.J.; Lopez, I.; Ortiz-Ortiz, I.

R;Ruiz, B.H.; Sanchez, I.; Ortega, G.J.; Lopez, I.; Ortiz-Ortiz, I.

A;Description: Nucleotide sequence and deduced amino-acid sequence of the structural prochamber: A48644

A;Reference number: A48644

A;Reference number: A86644

A;Reference number: A86644

A;Reference number: A86644

A;Reference number: A86644

A;Reference number: A86644

A;Reference number: A86644

A;Reference number: A86644

A;Reference number: A86644

A;Reference number: A86644

A;Reference number: A86644

A;Reference number: A86644
C;Superfamily: 1-aminocyclopropane-1-carboxylate synthase
C;Keywords: carbon-sulfur lyase; ethylene biosynthesis; phosphoprotein; pyridoxal phosph
F;279/Binding site: pyridoxal phosphate (Lys) (covalent) #status predicted
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C;Superfamily: hepatitis C virus genome polyprotein
C;Keywords: polyprotein
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                                                                                                                                                                                                    DB 2; Length 484;
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Pred. No. 58;
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                                                                                                                                                                                          Score 37; DB
Pred. No. 50;
0; Mismatches
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Best Local Similarity 55.0
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Best Local Similarity 66.7
Matches 6; Conservative
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6 IETWILRHP 14
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tes 5; Conserv
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Length 1163;

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F;2492-3391/Product: nonstructural protein NS5 #status predicted <NS5>
F;183,347,433/Binding site: carbohydrate (Asn) (covalent) #status predicted
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Best Local Similarity 55.6%;
Matches 5; Conservative
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Best Local Similarity 55.6
Matches 5, Conservative
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237 IETWILRHP 245
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237 IETWILRHP 245
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GNORTHINS: Capsid protein C; envelope protein B; membrane-associated protein MS5

UNCONTENTS: Capsid protein C; envelope protein B; membrane-associated protein NS5

C; Species: dengue virus type 2

C; Detein NS43, nonstructural protein NS4b; nonstructural protein NS5

C; Detein NS4251; M343496; M3753

C; Decession: A42451; A43496; A43763

R; Blok, J; McMilliam, S.M.; Butler, H.C.; Gibbs, A.J.; Weiller, G.; Herring, B.L.; Hems

Virology 187, 737-590, 1992

A; Title: Comparison of a dengue-2 virus and its candidate vaccine derivative: sequence I

A; Reference number: A42451; MUID: 92188532; PMID: 1312269

A; Rccossion: A42451

A; Roccossion: A42451

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B; Roccossion: A42451

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A,Residues: 1-338 «LAH»
A,Residues: 1-338 «LAH»
A,Residues: 1-338 «LAH»
A,Residues: 1-338 «LAH»
A,Cross-references: UNIPARC:UPIO000131DFB; GB:M19197; NID:g323654; PIDN:AAA42962.1; PID:
A,Cross-references: UNIPARC:UPIO000131DFB; GB:M19197; NID:g323654; PIDN:AAA42962.1; PID:
C; Keywords: ATP; capsid protein; envelope protein; glycoprotein; membrane protein; predicted «CMP»
F,12-280/Product: membrane protein preduzor #status predicted «MPP»
F,115-205/Domain: nonterminal signal sequence #status predicted «MPP»
F,280-Product: membrane protein #status predicted «MPP»
F,280-Product: monstructural protein NS1 #status predicted «NS1»
F,1189-1145/Product: nonstructural protein NS2 #status predicted «NS2»
F,1476-2090/Product: nonstructural protein NS2 #status predicted «NS2»
F,1476-2090/Product: nonstructural protein NS3 #status predicted «NS3»
F,1476-2090/Product: nonstructural protein NS3 #status predicted «NS3»
F,1759-1760/Region: nucleotide-binding motif A (P-loop)
F,1759-1760/Region: nucleotide-binding motif A (P-loop)
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F;2377-2488/Product: nonstructural protein NS4b #status predicted <NAB>
F;2898-3388/Product: nonstructural protein NS5 #status predicted <NS5>
F;183:347,433,905,982,1134,11174,1329,1369,2398,2302,2384,2454,2482,2641,2662,2701,2711/E
C; Date: 30-Jun-1989 #sequence_revision 30-Jun-1989 #text_change 31-Dec-2004
C; Accession: A29972
R; Hahn, Y.S.; Galler, R.; Hunkapiller, T.; Dalrymple, J.M.; Strauss, J.H.; Strauss, E.G.
A; Tiolle: Nucleotide sequence of dengue 2 RNA and comparison of the encoded proteins with A; Reference number: A29972; MUD: 88101365; PMID: 2827375
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F;2244-2491/Product: nonstructural protein NS4b #status predicted <N4B>
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Best Local Similarity 55...
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237 IETWILRHP 245
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genome polyprotein - dengue virus type 2 (strain 16681-PDK53)
N;Contains: capsid protein C; envelope protein E; membrane-associated protein M; nonstructural protein NS4a; nonstructural protein NS5bcies: dengue virus type 2
C;Species: dengue virus type 2
C;Date: 31-Dec-1992 #sequence_revision 31-Dec-1992 #text_change 31-Dec-2004
C;Accession: B42451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Residues: 1-3191 <a href="https://docume.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.com/bitch.co
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F;2174-2190/Domain: transmembrane #status predicted <TMD>
F;2174-2190/Domain: transmembrane #status predicted <TMD>
F;227-2243/Domain: transmembrane #status predicted <TMF>
F;227-2243/Domain: transmembrane #status predicted <TMF>
F;227-2249/Product: nonstructural protein NS4b #status predicted <N4B>
F;235-2368/Domain: transmembrane #status predicted <TMG>
F;241-2427/Domain: transmembrane #status predicted <TMH>
F;2492-3391/Product: nonstructural protein NS5 #status predicted <NS5>
F;183-347,433,905,982,1134,1174,1329,2301,2305,2346,2387,2457,2485,2644,2665,2704,2714/B)
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A;Title: Comparison of a dengue-2 virus and its candidate vaccine derivative: sequence re A;Reference number: A42451; MUID:92188532; PMID:1312269
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     Length 3391;
Score 37; DB 1; 1
Pred. No. 3.9e+02;
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JBEO; UNIPROT: O9W813; UNIPROT: O9J8B7; UNIPROT: Q9WDA3; UNIPROT: O11875; UNIPROT: O92835; UNIPROT: O11875; UNIPROT: O92835; UNIPROT: O11875; UNIPROT: O92835; UNIPROT: O13, 93-103, 1986

R; Putnak, J.R.; Furk, D.S.; Padmanabhan, R.; Irie, K.; Hoke, C.H.; Burke, D.S.

A; Title: Functional and antigenic domains of the dengue-2 virus nonstructural glycoprote A; Reference number: A28646; MUID: 08160069; PMID: 2964755
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F;2380-2491/Product: nonstructural protein NS4B #status predicted <N4B>
F;2492-31991/Product: nonstructural protein NS5 #status experimental <NS5>
F;2492-31991/Product: nonstructural protein NS5 #status experimental <NS5>
F;183,905,982,2305,2457,2704/Binding site: carbohydrate (Asn) (covalent) #status experim.
F;347,433,1134,1174,2301,2485,2665,2714/Binding site: carbohydrate (Asn) (covalent) #status
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N;Contains: capsid protein; envelope protein; membrane protein; nonstructural protein NS¹
a; nonstructural protein NS4b; nonstructural protein NS5
C;Spacies: Japanese encephalitis virus
C;Date: 30-Jun-1992 #sequence_revision 30-Jun-1992 #text_change 31-Dec-2004
C;Accession: A35519
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Virology 177, 541-552, 1990
Virology 177, 541-552, 1990
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Virology 177, 541-552, 1990
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A,Residues: 1-3432 «NIT>
A,Rolecule type: genomic RNA
A,Residues: 1-3432 «NIT>
A,Ross-references: UNIPARC:UP10000131E3F; GB:MS5506; NID:g331331; PIDN:AAA46248.1; PID::
C,Superfamily: hepatitis C virus genome polyprotein
C,Keywords: ATP; capsid protein; envelope protein; glycoprotein; nonstructural protein;
C,Keywords: ATP; capsid protein; envelope predicted «CAP>
F,1-127/Product: capsid protein; predicted «CAP>
F,46-67/Domain: transmembrane #status predicted «TNI>
F,10-127/Domain: transmembrane protein I precursor #status predicted «GLC>
F,128-294/Product: membrane protein II #status predicted «CLM>
F,28-294/Product: membrane protein II #status predicted «CLM>
F,280-294/Domain: transmembrane #status predicted «TNI>
F,280-294/Domain: transmembrane #status predicted «TNI>
F,785-767/Domain: transmembrane #status predicted «TNI>
F,785-1206/Product: nonstructural protein NSI #status predicted «NSI>
F,795-1206/Product: nonstructural protein NSI #status predicted «NSI>
F,1178-1197/Domain: transmembrane #status predicted «TNI>
F,1178-1197/Domain: transmembrane #status predicted «TNI>
F,1178-1197/Domain: transmembrane #status predicted «TNI>
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F,1178-1197/Domain: transmembrane #status predicted «NSI>
F,1178-1197/Domain: transmembrane #status predicted «N
PROT: 29J8D5; UNIPROT: 29J8D8; UNIPROT: 29WDA7; UNIPROT: 092753; UNIPROT: 0928834; UNIPROT: 29J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C. Keywords: ATP; envelope protein; divergence in; nonstructural protein; nucleo C. Keywords: ATP; envelope protein #status predicted <CAP>
F.2-114 / Product: capsid protein #status predicted <CAP>
F.115-280/Product: membrane glycoprotein #status predicted <MEM>
F.115-205/Domain: nonterminal signal sequence #status predicted <MED>
F.126-280/Product: membrane glycoprotein #status predicted <MED>
F.206-280/Product: membrane glycoprotein #status predicted <MED>
F.755-775/Domain: transmembrane #status predicted <TMI>
F.775-775/Domain: transmembrane #status predicted <TMI>
F.1127/Product: nonstructural protein NS1 #status predicted <NS2>
F.1128-1135/Product: nonstructural protein NS2A #status predicted <NS2>
F.1158-1175/Product: nonstructural protein NS2 #status predicted <NS2>
F.1158-1175/Product: nonstructural protein NS2 #status predicted <NSB>
F.1475/Product: nonstructural protein NS2 #status experimental <NS3>
F.14668-1675/Region: nucleotide-binding motif A (P-loop)
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55.6%; Pred. No. 3.9e+02;
Migmatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Molecule type: genomic RNA
A;Residues: 749-1227 <PUT>
A;Cross-references: UNIPARC:UPI0000178549
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237 IETWILRHP 245
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Matches 5, Conserv
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                                                                                       Genome polyprotein - dengue virus type 2 (strain Jamaica)

N;Contains: capsid protein C; envelope protein E; membrane-associated protein M; nonstructural protein N84s, nonstructural protein N855
C;Species: dengue virus type 2
C;Decies: dengue virus type 2
C;Decies: dengue virus type 2
C;Decies: dengue virus type 2
C;Decies: dengue virus type 2
C;Decies: dengue virus type 2
C;Date: 30-Sep-1989 #sequence_revision 30-Sep-1989 #text_change 31-Dec-2004
C;Accession: A94346; A84378; A55613; A29199
R;Deubel, V.; Kinney, R.M.; Trent, D.W.
Virology 155, 365-377, 1986
A;Title: Nucleotide sequence and deduced amino acid sequence of the structural proteins A;Recience number: A94346; MUID:87071658; PMID:3024394
A;Residues: 1-791 - ADEL-A;Accession: A94346
A;Residues: 1-791 - ADEL-A;Cross-references: UNIPROT:P07564; UNIPARC:UP100001710BB; GB:MI5975
R;Deubel, V.; Kinney, R.M.; Trent, D.W.
Virology 165, 234-244, 1988
A;Title: Nucleotide sequence and deduced amino acid sequence of the nonstructural protein A;Reference number: A94378; MUID:88265864; PMID:3389770
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A; Residues: 792-3391 <DE2>
A; Residues: 792-3391 <DE2>
A; Residues: 792-3391 <DE2>
A; Cross-references: UNIPARC: UPI0000174A05; GB:M20558
C; Superfamily: hepatitis C virus genome polyprotein glycoprotein, nonstructural protein; C; Reywords: ATP; capsid protein; envelope protein; glycoprotein; nonstructural protein; C; Reywords: ATP; capsid protein; envelope protein; glycoprotein; nonstructural protein; F; 211-280/Product: membrane-staciate predicted <TM2>
F; 101-117/Domain: transmembrane #status predicted <TM2>
F; 115-280/Product: membrane-associated protein M #status predicted <MPN>
F; 226-280/Pomain: transmembrane #status predicted <TM3>
F; 226-280/Pomain: transmembrane #status predicted <TM3>
F; 226-280/Pomain: transmembrane #status predicted <TM3>
F; 221-775/Product: envelope protein E #status predicted <TM3>
F; 221-775/Product: envelope protein E #status predicted <TM3>
F; 221-775/Product: nonstructural protein NS2 #status predicted <NS1>
F; 1128-1345/Product: nonstructural protein NS2 #status predicted <NS2>
F; 1475-2093/Product: nonstructural protein NS2 #status predicted <NS3>
F; 1475-2093/Product: nonstructural protein NS2 #status predicted <NS3>
F; 1688-1675/Region: nucleotide-binding motif A (P-loop)
F; 775-775/Pomain: protein NS3 #status predicted <NS3>
F; 1768-175/Pomain: nucleotide-binding motif B (P-loop)
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NiContains: capsid protein; envelope protein; membrane glycoprotein; nonstructural protein NS4A; nonstructural protein NS4B; nonstructural protein NS5C; Species: dengue virus type 2
C; Date: 30-Jun-1992 #sequence_revision 30-Jun-1992 #text_change 31-Dec-2004
C; Accession: 302019; A28646
R; Irie, K.; Mohan, P.M.; Sasaguri, Y.; Putnak, R.; Padmanabhan, R.
Gene 75, 197-211, 1989
A; Itle: Sequence analysis of cloned dengue virus type 2 genome (New Guinea-C strain).
A; Accession: 302019; MulD:89223751; PMID:2714651
A; Accession: J30213 A: MulD:89223751; PMID:2714651
A; Mohan, B; MulD:89223751; PMID:2714651
A; Mohan, B; MulD:8923751; PMID:2714651
A; Mohan, B; MulD:8923751; PMID:2714651
A; Mohan, B; MulD:8923751; PMID:2714651
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Pred. No. 3.9e+02;
3; Mismatches 1; Indels
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F;1505-2123/Product: nonstructural protein NS3 #status predicted <NS3>
F;1696-1705/Region: nucleotide-binding motif A (P-loop)
F;1785-1790/Region: nucleotide-binding motif B
F;1785-1792/Region: nucleotide-binding motif B
F;1785-1792/Region: DEAH motif
F;2114-2412/Product: nonstructural protein NS4a #status predicted <N4A>
F;2114-2527/Product: nonstructural protein NS54 #status predicted <NS5>
F;2528-3432/Product: nonstructural protein NS5 #status predicted <NS5>
F;142,448,924,1001,1594,1950,2463,2491,2761,2866,2904/Binding site: carbohydrate (Asn)
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71.2%; Score 37; DB 1; Length 3432;
Best Local Similarity 62.5%; Pred. No. 3.9e+02;
Matches 5; Conservative 2; Mismatches 1; Indels
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252 ENWIIRNP 259
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Biocceleration Ltd. Biocceleration Ltd. Search time 139 Seconds (Without alignments) 9.893 Million cell updates/sec	90	cers: . 2849598	s predicted by chance to have a e score of the result being printed total score distribution.	Description	0891,5 dengue vi 0891,5 dengue vi 0891,5 dengue vi 0891,9 dengue vi 0891,0 dengue vi 0891,0 dengue vi 032p12 dengue vi 032p12 dengue vi 054315 dengue vi 06433 dengue vi 06433 dengue vi 06434 dengue vi 06443 dengue vi 06441 dengue vi 06441 dengue vi 06441 dengue vi 06441 dengue vi 06441 dengue vi 06444 dengue vi 06444 dengue vi 06444 dengue vi 06444 dengue vi 06444 dengue vi 06445 dengue vi 06446 dengue vi 06446 dengue vi 06446 dengue vi 06446 dengue vi 06446 dengue vi 06446 dengue vi 06446 dengue vi 06446 dengue vi 06449 dengue vi 06449 dengue vi 06449 dengue vi 06449 dengue vi 06449 dengue vi 06449 dengue vi 06449 dengue vi 066449 dengue vi	dengue
GenCore version Copyright (c) 1993 - 2006 protein search, using sw model August 31, 2006, 11:33:43; S	DENGUE_SEROTYPE4 5.2 1 veswflrnp 9 BLOSUM62 Gapop 10.0 , Gapext 0.5 2849598 seqs, 925015592 resi	hits satisfying chosen par length: 0 length: 2000000000 : Minuum Match 0% Maximum Match 100% Listing first 100 summari	Uniprot_7.2:* 1: uniprot_sprot:* 2: uniprot_trembl:* . is the number of result aater than or equal to the erived by analysis of the	SUMMARIES Query Match Length DB ID	88.5 131 2 08 V10 V10 V10 V10 V10 V10 V10 V10 V10 V10	88.5 646 2 QGYFKB_D
OM protein - F Run on:	Title: Perfect score: Sequence: Scoring table: Searched:	number m DB se m DB se rocessi	Database : Pred. No score griand is d	Result No. Score	1 1 2 E 4 2 0 C 8 0 0 1 1 1 1 1 1 1 1 1 1 1 2 2 2 2 2 2 2	4

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Dengue virus type
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Q8V1.77 DEN4
Q8V1.77;
AC Q8V1.77;
DT 01-MAR-107 01-MAR-107
DT 07-FEB-107 NAM-107
DE Prememb
GN NAM-=pri
OS Dengue
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Q8V1J6
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MEDILINE=22249823; PubMed=12363071;
MEDILINE=2249823; PubMed=12263071;
Diaz F.J., Farfan-Ale J.A., Olson K.E., Lorono-Pino M.A., Gubler D.J.,
Blair C.D., Black W.C. IV, Beaty B.J.;
"Genetic to.", Black W.C. IV, Beaty B.J.;
"Genetic variation within the premembrane coding region of dengue
viruses from the Yucatan peninsula of Mexico.";
Am. J. Trop. Med. Hyg. 67:93-101(2002).
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NUCLEOTIDE SEQUENCE:
NEDLINE=22249823; PubMed=12363071;
Diaz F.J., Farfan-Ale J.A., Olson K.E., Lorono-Pino M.A., Gubler D.J.,
Blair C.D., Black W.C. IV, Beaty B.J.;
"Genetic variation within the premembrane coding region of dengue
viruses from the Yucatan peninsula of Mexico.";
Am. J. Trop. Med. Hyg. 67:93-101(2002).
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Flavivirus; Dengue virus group.
NCBI_TaxID=11070;
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Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
NCBI_TaxID=11070;
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GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
InterPro; IPR000069; Flavi_M.
Pfan; PF01004; Flavi_M: 1.
Pfan; PF01504; Flavi_M: 1.
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                                                                                                       01-MAR-2002, integrated into UniProtKB/TrEMBL 01-MAR-2002, sequence version 1. 07-FEB-2006, entry version 10.
                                                                   131 AA.
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GO; GO:0019028; C:viral capsid; IEA.
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                                                              PRELIMINARY;
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Matches 8; Conservative
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Q8V1J4;
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QBV1J4_DEN4
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Distributed under the Creative Commons Attribution-NoDerivs License
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MEDILINE=22249823; Publed=12363071;
MEDILINE=22249823; Publed=12363071;
Diaz F.J., Farfan-Ale J.A., Olson K.E., Lorono-Fino M.A., Gubler D.J.,
Blair C.D., Black W.C. IV, Beaty B.J.;
"Genetic vo. Black Thin the premembrane coding region of dengue
viruses from the Yucatan peninsula of Mexico.";
Am. J. Trop. Med. Hyg. 67:93-101(2002).
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Viruses; srRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
NCBI_TaxID=11070;
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88.9%; Pred. No. 2;
tive 0; Mismatches 1; Indels
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                                                                                                                                                                           131 AA; 14975 MW; 10F1CD64F5364148 CRC64;
GO, GO:0019058; P:viral infectious cycle; IEA.
InterPro; IPR0000535; Plavi M.
InterPro; IPR0002535; Flavi propep.
PEam; PF01004; Flavi M; 1.
PÉam; PF01570; Flavi propep; 1.
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GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019958; P:viral infectious cycle; IEA.
InterPro; IPR000069; Flavi_M.
Pfan; PF01004; Plavi_M.
Pfam; PF01004; Plavi_M: 1.
Pfam; PF01570; Flavi_M: 1.
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entry version 10.
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07-FEB-2006, entry version 10.
Premembrane (Fragment).
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Matches 8; Conservative
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                                                                                                        MEDLINE=22249823; PubMed=12363071;
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Blair C.D., Black W.C. IV, Beaty B.J.;
"Genetic variation within the premembrane coding region of dengue
viruses from the Yucatan peninsula of Mexico.";
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Diaz F.J., Rarfan-Ale J.A., Olson K.E., Lorono-Pino M.A., Gubler D.J.,
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"Genetic variation within the premembrane coding region of dengue
viruses from the Yucatan peninsula of Mexico.";
Am. J. Trop. Med. Hyg. 67:93-101(2002).
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Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
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GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
InterPro; IPR000069; Flavi_M.
InterPro; IPR002535; Flavi_propep.
Pfam; PF01004; Flavi_M; 1.
Pfam; PF01570; Flavi_propep; 1.
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InterPro; IPR002535; Flavi propep.
Pfam; PF01004; Flavi M; 1.
Pfam; PF01570; Flavi propep; 1.
                       Flavivirus; Dengue virus group
NCBI_TaxID=11070;
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8. Conservative
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Distributed under the Creative Commons Attribution-NoDerivs License
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Diaz F.J., Farfan-Ale J.A., Olson K.E., Lorono-Pino M.A., Gubler D.J.,
Blair C.D., Black W.C. IV, Beaty B.J.;
"Genetic variation within the premembrane coding region of dengue
viruses from the Yucatan peninsula of Mexico.";
Am. J. Trop. Med. Hyg. 67:93-101(2002).
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Diaz F.J., Farfan-Ale J.A., Olson K.E., Lorono-Pino M.A., Gubler D.J.,
Blair C.D., Black W.C. IV, Beaty B.J.;
"Genetic variation within the premembrane coding region of dengue
viruses from the Yucaten peninsula of Mexico.";
Am. J. Trop. Med. Hyg. 67:93-101(2002).
                                                                                                                                                                  Dengue virus type 4.
Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
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Viruses; seNRA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
NCBI_TaxID=11070;
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88.9%; Pred. No. 2;
iive 0; Mismatches 1; Indels
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131 AA; 14975 MW; 10F1CD64F5364148 CRC64;
                                                  01-MAR-2002, integrated into UniProtKB/TrEMBL.
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GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
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PRT;
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InterPro; IPR002535; Flavi_propep.
Pfam; PF01004; Flavi M; 1.
Pfam; PF01570; Flavi propep; 1.
                                                                    01-MAR-2002, sequence version 1.
07-FEB-2006, entry version 10.
Premembrane (Fragment).
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348 AA.

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PRELIMINARY; PRT;
                                                                                       STRAIN=Cairns;
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SEQUENCE 34
Q3ZPL4 DEN4
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       Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms Distributed under the Creative Commons Attribution-NoDerivs License
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                                                                                                            88.5%; Score 46; DB 2; Length 131; 88.9%; Pred. No. 2;
                                                                                                                           1; Indels
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NON TER 131 131
SEQUENCE 131 AA; 14975 MW; 10F1CD64F5364148 CRC64;
                         EMBL; AF455620; AAL67822.1; -; Genomic_RNA.
GO; GO:0019028; C:viral capaid; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
InterPro; IRRO00069; Flavi.M.
Ffam; PF01004; Flavi.M; 1.
Pfam; PF01004; Flavi.M; 1.
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Best Local Similarity 88، ک
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Best Local Similarity 88.9'
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RESULT 9 Q3ZPL4_DEN4

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27-SEP-2005, integrated into UniProtKB/TrEMBL.
27-SEP-2005, sequence version 1.
27-SEP-2006, entry version 3.
Polyprotein (Fragment).
Dengue virus type 4.
Viruses; sRNA positive-strand viruses, no DNA stage; Flaviviridae;
NETAVIVIRUS, Dengue virus group.
NCBL_TAXID=11070;
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03ZPLS;
03ZPLS;
27-SEP-2005, integrated into UniProtKB/TrEMBL.
27-SEP-2005, sequence version 1.
07-FRB-2006, entry version 3.
Polyprotein (Fragment).
Dengue virus type 4.
Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
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Pyke A.T., Hanna J., Richards A., Taylor C.T., Morgan A.,
Humphreys J., Brookes D., Smith G.A.;
"Defining Dengue in the New Millennium.";
Arbovirus Res. Aust. 0:0-0(2005).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pyke A.T., Hanna J., Richards A., Taylor C.T., Morgan A. Humphreys J., Brookes D., Smith G.A.; "Defining Dengue in the New Millennium."; Arbovirus Res. Aust. 0:0-0(2005).
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GO, GO:0016021, C:integral to membrane; IEA.
GO; GO:0019028, C:viral capsid; IEA.
GO; GO:0019031, C:viral envelope; IEA.
GO; GO:0019031, C:viral infectious gyle; IEA.
InterPro; IPR011999; Flav glyE_cen_dm.
InterPro; IPR011999; Flav glyE_cen_dm.
InterPro; IPR011998; Vzl glyE_cen_dm.
Fram; PF00869; Flavi glyCoprot; 1.
Pfam; PF01004; Flavi M. 1.
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NCBI_TaxID=11070;
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Matches 8; Conservative
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GO; GO:0019028; C:viral capsid; IEA.

GO; GO:0019028; C:viral capsid; IEA.

GO; GO:0019011; C:viral capsid; IEA.

GO; GO:0019011; C:viral envelope; IEA.

GO; GO:0019018; F:structural molecule activity; IEA.

GO; GO:0019018; F:structural molecule activity; IEA.

GO; GO:0019018; F:structural molecule activity; IEA.

InterPro; IPR011999; F:laviglyE_cen_dm.

InterPro; IPR000069; F:laviglyE_cen_dm.

InterPro; IPR000316; F:laviglyE_cen_dm.

Ffam; PF02831; F:laviglyCop_C; 1.

Ffam; PF02831; F:laviglyCop_C; 1.

Ffam; PF00869; F:laviglyCop_C; 1.
                                                                                     01-NOV-1996, integrated into UniProtKB/TrEMBL.
01-NOV-1996, sequence version 1.
07-FEB-2006, entry version 26.
Polyprotein (Fregment).
                                   545 AA.
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HSSP, Q88653; 10KE.
                                   PRT;
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STRAIN-El Salvador 1983;
MEDLINE-97437482; PubMed-9292015;
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MEDLINE=97437482; PubMed=9292015;
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07-FBB-2006, entry version 26.
Polyprotein (Fragment).
Dengue virus type 4.
                                   PRELIMINARY;
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545 AA;
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Q66435_DEN4
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Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
VCI_TaxID=11070;
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348 348
348 AA; 38409 MW; 8127734BF26F94EE CRC64;
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HSSP; Q88653; 10KE.
G0; GG:0016021; C:integral to membrane; IEA.
G0; G0:0019028; C:viral capsid; IEA.
G0; G0:0019031; C:viral envelope; IEA.
G0; G0:0019038; F:structural molecule activity; IEA.
G0; G0:0019058; P:viral infectious cycle; IEA.
InterPro; IRR011999; Flav glyE_cen_dm.
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InterPro; IRRO1399; Vrl_glyE Ig-like.
InterPro; IPRO11999; Vrl_glyE_cen_dim.
Fram; PF02832; Flavi glyCop C; 1.
Pfam; PF00869; Flavi glyCop C; 1.
Pfam; PF01004; Flavi m; 1.
InterPro; IPR011999; Flav glyE_cen_dm.
InterPro; IPR000069; Flavi M.
                                            InterPro; IPR011998; Vrl glyB cen dim. Pfam; PF00869; Flavi glycoprof; 1. Pfam; PF01004; Flavi M; 1.
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MEDLINE=97437482; PubMed=9292015;
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07-FEB-2006, entry version 26.
Polyprotein (Fragment).
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Best Local Similarity 88.9
Matches 8; Conservative
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Flavivirus; Dengue virus group.
NCBI_TaxID=11070;
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                                                                                  88.5%; Score 46; DB 2; Length 545; 88.9%; Pred. No. 9.5; tive 0; Mismatches 1; Indels
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                                                       59675 MW; 70E1CB02DCC7F33F CRC64;
membrane protein M.
envelope protein E.
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01-NOV-1996, integrated into UniProtKB/TrEMBL.
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Matches

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NCBI_TaxID=11070;
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                                                              2; Length 545;
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MEDLINE=97437482; PubMed=9292015;
Lanciotti R.S., Gubler D.J., Trent D.W.;
"Molecular evolution and phylogeny of dengue-4 viruses.";
J. Gen. Virol. 78:2279-2284(1997).
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GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:0019039; C:viral envelope; IEA.
GO; GO:0019058; P:structural molecule activity; IEA.
GO; GO:0019058; P:structural molecule activity; IEA.
InterPro; IPR011999; Flav glyE_cen_dm.
InterPro; IPR000356; Flav glyE_cen_dm.
InterPro; IPR000356; Flav glyE_cen_dim.
Pfam; PP02812; Flavi_glyCop_C; 1.
Pfam; PP02812; Flavi_glyCop_C; 1.
Pfam; PP02869; Flavi_glyCoprot; 1.
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545 545
545 AA; 59593 MW; 35A364BE423F8153 CRC64;
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envelope protein E.
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01-NOV-1996, sequence version 1.
07-FEB-2006, entry version 26.
Polyprotein (Fragment).
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01-NOV-1996, integrated into UniProtKB/TrEMBL.
01-NOV-1996, sequence version 1.
07-FEB-2006, entry version 26.
Polyprotein (Fragment).
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HSSP; Q88653; 10KE.
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Q66438 DEN4
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Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
  Distributed under the Creative Commons Attribution-NoDerivs License
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MEDLINE=91437482; PubMed=9292015;
Lanciotti R.S., Gubler D.J., Trent D.W.;
"Molecular evolution and phylogeny of dengue-4 viruses.";
J. Gen. Virol. 78:2279-2284(1997).
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GO; GO: 0019028; C:viral capsid; IEA.
GO; GO: 0019031; C:viral envelope; IEA.
GO; GO: 0019039; C:viral envelope; IEA.
GO; GO: 0019058; P: structural molecule activity; IEA.
GO; GO: 0019058; P: structural molecule activity; IEA.
GO; GO: 0019058; P: structural molecule activity; IEA.
InterPro; IPR001099; Flav glyE_cen_dm.
InterPro; IPR001099; Flav glyE_cen_dim.
Pfam; PF002812; Flavi_glyCop_C; 1.
Pfam; PF002812; Flavi_glyCop_C; 1.
Pfam; PF00804; Flavi_M; 1.
                                    EMBL; U18428; AAB70679.1; -; Genomic_RNA.
HSSP; Q8865; 10XE.
GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019021; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:0005199; F:structural molecule activity; IEA.
GO; GO:001908; P:viral infectious cycle; IEA.
InterPro; IPR01099; Flav_glyE_cen_dm.
InterPro; IPR000069; Flav_glyE_cen_dm.
InterPro; IPR000386; Flv_glyE_I9-like.
InterPro; IPR01999; V1_glyE_cen_dim.
Ffam; PF02832; Flav_glyCop_C; 1.
Pfam; PF02893; Flav_glyCop_C; 1.
Pfam; PF01869; Flav_glyCop_C; 1.
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545 AA; 59667 MW; FBAD339FD161840CA CRC64;
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HSSP; Q88653; 10KE.
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88.9%; Pred. No. 9.5;
rative 0; Mismatches 1; Indels
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MEDLINE=97437482; PubMed=9292015;
Lanciotti R.S., Gubler D.J., Trent D.W.;
"Molecular evolution and phylogeny of dengue-4 viruses.";
J. Gen. Virol. 78:2279-2284(1997).
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GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:0019039; F:structural molecule activity; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
InterPro; IPR011999; Plav; glyE_cen_dm.
InterPro; IPR000365; Plav; JYE_IG-like.
InterPro; IPR00198; VI_GlyE_cen_dim.
Pf02087; Plav; glyE_cen_dim.
Pf03087; Plav; glyE_cen_dim.
Pf03087; Plavi_glyCop_C; 1.
Pfam; Pf03087; Plavi_glyCop_C; 1.
Pfam; Pf03087; Plavi_glyCop_C; 1.
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545 AA; 59675 MW; 70E1CB02DCC7F33F CRC64;
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                        GO:0005198; F:structural molecule activity; IEA.
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envelope protein E.
                                                GO, GO:0019058; P:viral infectious cycle; IEA. InterPro: IPR011999; Flav glyE_cen_dm. InterPro: IPR011999; Flav glyE_cen_dm. InterPro: IPR000069; Flav glyE Ig-like. InterPro: IPR011998; Vrl_glyE Ig-like. PF02812; Flavi_glyCop_C; 1. PF02812; Plavi_glyCop_C; 1. PF000669; Plavi_glyCop_C; 1. PF00064; Flavi_glyCop_C; 1.
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HSSP; Q88653; 10KE.
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Best Local Similarity 88.9
Matches 8; Conservative
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AC Q66440;
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Distributed under the Creative Commons Attribution-NoDerivs License
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01-NOV-1996, sequence version 1.
07-FBB-2006, entry version 26.
Polyprotein (Fragment).
Dengue virus type 4.
Viruses; seXNA positive-strand viruses, no DNA stage; Flaviviridae;
Plavivirus; Dengue virus group.
NCBI_TAXID=11070;
Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
NCBI_TaxID=11070;
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                                                                                                                                                                                                                                                                                                                    Lanciotti R.S., Gubler D.J., Trent D.W.; "Molecular evolution and phylogeny of dengue-4 viruses."; J. Gen. Virol. 78:2279-2284(1997).
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GO; GO: 0010021; C: Lintegral to membrane; IEA.

GO; GO: 0019021; C: Viral capsid; IEA.

GO; GO: 0019031; C: Viral envelope; IEA.

GO; GO: 0019058; F: Structural molecule activity; IEA.

GO; GO: 0019058; P: Viral infectious cycle; IEA.

InterPro; IPR010199; Flav glyE.cen.dm.

InterPro; IPR000069; Flavi glyE.

InterPro; IPR0000336; Flavi glyE.

InterPro; IPR0000336; Flavi glyE.

Ffam; PF00832; Flavi glyCop.C; 1.

Pfam; PF00863; Flavi glyCop.C; 1.

Pfam; PF00869; Flavi glyCop.C; 1.
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545 AA; 59615 MW; 56365D574E542122 CRC64;
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GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
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HSSP; Q88653; 10KE.
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STRAIN-New Caledonia 1984;
MEDLINE-97437482; PubMed-9292015;
                                                                                                                                                                                                                                            STRAIN=Mexico 1984;
MEDLINE=97437482; PubMed=9292015;
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Best Loc Matches

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RESULT 17
C06439 DEN
C06439 DEN
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C06433 AC
C0643 DEN
C01-NO
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01-NOV-1996, integrated into UniProtKB/TrEMBL.
01-NOV-1996, sequence version 1.
07-FEB-2006, entry version 26.
Polyprotein (Fragment).
Dengue virus type 4.
Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
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MEDLINE=97437482; PubMed=9292015;
MEDLINE=1 R.S., Gubler D.J., Trent D.W.;
"Molecular evolution and phylogeny of dengue-4 viruses.";
J. Gen. Virol. 78:2279-2284(1997).
MEDLINE=97437482; PubMed=9292015;
Lanciotii R.S., Gubler D.J., Trent D.W.;
Molecular evolution and phylogeny of dengue-4 viruses.";
J. Gen. Virol. 78:2279-2284(1997).
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HSSP; Q88653; 10KE.
GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:001901; C:viral envelope; IEA.
GO; GO:001901; C:viral envelope; IEA.
GO; GO:0019089; P:viral infectious cycle; IEA.
InterPro; IPR011999; Flav glyE_cen_dm.
InterPro; IPR011999; Flav glyE_cen_dm.
InterPro; IPR011999; Val_glyE_iq_ide.
InterPro; IPR011999; Val_glyE_cen_dm.
Flavero; IPR011999; Val_glyE_cen_dm.
Flavero; IPR011999; Val_glyE_cen_dm.
Flavero; IPR011999; Val_glyE_cen_dim.
Flavero; Flavi_glyCop_C; 1.
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GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:0019039; C:viral envelope; IEA.
GO; GO:0019058; F:structural molecule activity; IEA.
GO; GO:0019058; F:structural molecule activity; IEA.
InterPro; IPR011999; Flav glyE_cen_dm.
InterPro; IPR000069; Flav glyE_cen_dim.
InterPro; IPR011998; V1 glyE_cen_dim.
FFam; PF02832; FlaviglyCop_C; 1.
Ffam; PF02832; FlaviglyCop_C; 1.
Ffam; PF03069; FlaviglyCoprot; 1.
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545 AA; 59621 MW; E576F2426BDF9452 CRC64;
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envelope protein E.
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HSSP; Q88653; 10KE.
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Best Local Similarity 88.9
Matches 8; Conservative
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Q66443 DEN4
ID Q66443 DEN4
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Viruses, saRNA positive-strand viruses, no DNA stage, Flaviviridae,
Flavivirus, Dengue virus group.
NCBI_TaxID=11070;
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Viruees; sRRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
NCBI_TaxID=11070;
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"Molecular evolution and phylogeny of dengue-4 viruses.";
J. Gen. Virol. 78:2279-2284(1997).
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GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope: IEA.
GO; GO:0019039; C:viral envelope: IEA.
GO; GO:0019058; F:structural molecule activity; IEA.
GO; GO:0019058; F:structural molecule activity; IEA.
GO; GO:0019058; F:structural molecule activity; IEA.
InterPro; IPR001099; Flav, glyE_cen_dm.
InterPro; IPR001099; Flav, glyE_cen_dim.
Pfam; PF00302; Flav, glyCop_C; 1.
Pfam; PF00302; Flavi, glyCop_C; 1.
Pfam; PF00405; Flavi, glyCop_C; 1.
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envelope protein E.
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01-NOV-1996, integrated into UniProtKB/TrEMBL 01-NOV-1996, sequence version 1. 07-FEB-2006, entry version 26. Polyprotein (Fragment).
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HSSP; Q88653; 10KE.
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STRAIN-Philippines 1964;
MEDLINE-97437482; PubMed-9292015;
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066442 DEN
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OC Flavus
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Q66446 DEN4
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Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
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MEDLINE=97437482; PubMed=9292015;
Laciotti R.S., Gubler D.J., Trent D.W.;
"Molecular evolution and phylogeny of dengue-4 viruses.";
J. Gen. Virol. 78:2279-2284(1997).
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GO; GO: 0016021; C: viral capsid; IEA.
GO; GO: 0019021; C: viral envelope; IEA.
GO; GO: 0019031; C: viral envelope; IEA.
GO; GO: 00019059; F: structural molecule activity; IEA.
GO; GO: 0019059; F: structural molecule activity; IEA.
InterPro; IPR010199; F: lav_glyE_cen_dm.
InterPro; IPR000063; F: lav_glyE_lg-like.
InterPro; IPR01098; V: lglyE_lg-like.
Fram; PF02832; F: lav_glycop_C; 1.
Pfam; PF02832; F: lav_glycop_C; 1.
Pfam; PF02869; F: lav_glycop_C; 1.
                                                                                                                                                                                                                       545 AA; 59631 MW; 3C31192D2733B9DD CRC64;
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HSSP; Q88653; 10KE.
Pfam; PF00869; Flavi_glycoprot; 1.
Pfam; PF01004; Flavi_M; 1.
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NCBI_TaxID=11070;
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                                                                 Polyprotein.
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RESULT 23 Q66445_DEN4

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                                                                                                Viruses; ssrNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
NCBI_TaxID=11070;
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Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
Flavivirus; Dengue virus group.
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SUCLECTIOE SEQUENCE.
STRAIN=Tabiti 1979;
MEDLINE=97437482; PubMed=9292015;
MacDLINE=97437482; Gubler D.J., Trent D.W.;
Lanciotti R.S., Gubler D.J., Trent D.W.;
Wolecular evolution and phylogeny of dengue-4 viruses.";
J. Gen. Virol. 78:2279-2284(1997).
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MEDLINE=97437482; PubMed=9222015;
Araciotci R.S., Gubler D.J., Trent D.W.;
"Molecular evolution and phylogeny of dengue-4 viruses.";
J. Gen. Virol. 78:2279-2284(1997).
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GO; GO:0019028, C:viral capsid; IEA.
GO; GO:0019031, C:viral capsid; IEA.
GO; GO:0019031, C:viral envelope; IEA.
GO; GO:0019058; F:structural molecule activity; IEA.
GO; GO:0019058; F:structural molecule activity; IEA.
InterPro; IPR011999; Flav glyE_cen_dm.
InterPro; IPR000069; Flav! MY_E GP.
InterPro; IPR000069; Flav! GlyE_Ig-like.
InterPro; IPR011998; VI glyE_cen_dim.
Pfam; PF02832; Flav! glyCop_C; 1.
Pfam; PF02832; Flav! glyCop_C; 1.
Pfam; PF02805; Flav! glyCop_C; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  membrane protein M.
envelope protein E.
01-NOV-1996, integrated into UniProtKB/TrEMBL.
01-NOV-1996, sequence version 1.
07-FEB-2006, entry version 26.
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01-NOV-1996, integrated into UniProtKB/TrEMBL.
01-NOV-1996, sequence version 1.
07-FBB-2006, entry version 26.
Polyprotein (Fragment).
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                                                                     Polyprotein (Fragment).
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                                                                                             Dengue virus type
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545 AA; 59666 MW; 5B8A14D46277DDA3 CRC64;
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O66447 DENA PRELIMINARY, PRT, 545 AA.

AC 066447 DENA PRELIMINARY, PRT, 545 AA.

DO 10-NOV-1996, integrated into UniProckB/TrEMBL.

DT 01-NOV-1996, integrated into UniProckB/TrEMBL.

DT 01-NOV-1996, sequence version 1.

DT 01-NOV-1996, integrated into UniProckB/TrEMBL.

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Pred. No. 9.5;
0; Mismatches 1; Indels
                                                                                                     GO, GO:0016021, C:integral to membrane, IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:0019039; F:structural molecule activity; IEA.
GO; GO:0019059; F:structural molecule activity; IEA.
InterPro; IPR001059; Flav glyE_cen_dm.
InterPro; IPR000059; Flav glyE_iglyE.
InterPro; IPR000038; Flav glyE_iglike.
InterPro; IPR001998; VI glyE_iglike.
Ffam; PF02832; FlaviglyCop_C; 1.
Pfam; PF02893; FlaviglyCop_C; 1.
Pfam; PF03045; FlaviglyCoprot; 1.
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envelope protein E.
                                             EMBL; U18439; AAB70690.1; -; Genomic_RNA
HSSP; Q88653; 10KE.
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Best Local Similarity 88.9%;
Matches 8; Conservative
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07-FEB-2006, entry version 26.
Polyprotein (Fragment).
Dengue virus type 4.
Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae; Flavivirus; Dengue virus group.
NCBI_TaxID=11070;
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88.5%; Score 46; DB 2; Length 545;
Best Local Similarity 88.9%; Pred. No. 9.5;
Matches 8; Conservative 0; Mismatches 1; Indels
88.5%; Score 46; DB 2; Length 545; 88.9%; Pred. No. 9.5; tive 0; Mismatches 1; Indels
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HSSP; Q88653; 10KB.
GO; GO:0016028; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:0005199; F:seructural molecule activity; IEA.
GO; GO:0005199; F:seructural infectious cycle; IEA.
GO; GO:0019638; P:viral infectious cycle; IEA.
InterPro; IPR0101999; Flav glyE_cen_dm.
InterPro; IPR000069; Flav glyE_IG-like.
InterPro; IPR010999; Vrl_GlyE_IG-like.
InterPro; IPR010999; Vrl_GlyE_IG-like.
Ffam; PF02832; Flavi_GlyCop_C; 1.
Pfam; PF02869; Flavi_GlyCop_C; 1.
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545 AA; 59623 MW; 71AED00247DF7977 CRC64;
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envelope protein E.
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Q66449 DEN4

AC Q66449;
DT 01-NOV-1996, integrated into UniProtKB/TrEMBL.

DT 01-NOV-1996, sequence version 1.

DT 07-FEB-2006, entry version 26.

DE POlyprotein (Fragment).

OS Dengue virus type 4.
                                                                                                                                                                                                                                             RESULT 26
Q66448 DEN4
DO Q66448 DEN4
AC Q66448;
DT 01-NOV-1996, integrated into UniProtKB/TrEMBL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE=97437482; PubMed=9292015;
  Query Match 88.5
Best Local Similarity 88.9
Matches 8; Conservative
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7 VESWILRNP 15
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STRAIN=Thailand 1978;
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583 AA;
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Flavivirus; Dengue virus group.
NCBL_TaxID=11070;
  Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae;
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                                                                          NUCLEOTIDE SEQUENCE.
STRAIN=Thailand 1984;
MEDLINE=97437482; PubMed=9292015;
Amoicti R.S., Gubler D.J., Trent D.W.;
"Molecular evolution and phylogeny of dengue-4 viruses.";
J. Gen. Virol. 78:2279-2284(1997).
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GO; GO:0019028; C:viral capsid; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:0019039; C:viral envelope; IEA.
GO; GO:00019058; F:structural molecule activity; IEA.
GO; GO:0019058; F:structural molecule activity; IEA.
GO; GO:0019058; F:structural molecule activity; IEA.
InterPro; IPR001099; Flav_glyE_cen_dm.
InterPro; IPR001099; Flav_glyE_cen_dim.
Ffam; PF00312; Flavi_glyCop_C; 1.
Ffam; PF00365; Flavi_glyCop_C; 1.
Ffam; PF00365; Flavi_glyCop_C; 1.
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GO; GO:0019028; C:viral capatd; IEA.
GO; GO:0019031; C:viral envelope; IEA.
GO; GO:0019058; P:viral infectious cycle; IEA.
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Pyke A.T., Hanna J., Richards A., Taylor C Humphreys J., Brookes D., Smith G.A.;
Defining Dergue in the New Millennium.";
Arbovirus Res. Aust. 0:0-0(2005).
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HSSP; Q88653; 10KE.
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                     Flavivirus, Dengue virus group
NCBI_TaxID=11070;
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Q3ZPL3;
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GO; GO: 001905
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DT 07-FEB-2
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Distributed under the Creative Commons Attribution-NoDerivs License
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STRAIN=No.14/Sri Lanka/Human;
STRAIN=No.14/Sri Lanka/Human;
STRAIN=No.14/Sri Lanka/Human;
STRAIN=No.14/Sri Lanka/Human;
Sububmed=15302944; DOI=10.1099/vir.0.80120-0;
Mathenge E.G., Parquet M.D.C., Funakoshi Y., Houhara S., Wong P.F.,
Ichinose A., Hasebe F., Inoue S., Morita K.;
"Fusion PCR generated Japanese encephalitis virus/dengue 4 virus
chimera exhibits lack of neuroinvasiveness, attenuated neurovirulence,
and a dual-flavi immune response in mice.";
J. Gen. Virol. 85:2503-2513(2004).
                                                                                                                           Gaps
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NCBI_TaxID=11070;
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Mathenge E.G.M., Parquet M.D.C., Wong P.F., Ichinose A., Hasebe F.,
Inoue S., Morita K.;
Submitted (FEB-2004) to the EMBL/GenBank/DDBJ databases.
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GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019028; C:viral capsid; IEA.
GO; GO:001931; C:viral envelope; IEA.
GO; GO:001931; C:viral envelope; IEA.
GO; GO:0019058; P:seructural molecule activity; IEA.
GO; GO:0019058; P:seructural molecule activity; IEA.
InterPro; IPR011999; Flavi_Dropep.
InterPro; IPR000535; Flavi_Dropep.
InterPro; IPR011998; VI_GIPE_IG-1ike.
InterPro; IPR011998; VI_GIPE_Cen_dim.
Pfam; PP02832; Plavi_G1ycop_C; 1.
63804 MW; 78FE1741AA8283DD CRC64;
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                                                       88.5%; Score 46; DB 2;
88.9%; Pred. No. 10;
tive 0; Mismatches
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tive 0; Mismatches 1
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Pfam; PF00869; Flavi glycoprot; 1
Pfam; PF01004; Flavi M; 1.
Pfam; PF01570; Flavi propep; 1.
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Carrington C.V.F., Foster J.E., Pybus O.G., Bennett S.N., Holmes E.C.,
Submitted (FEB-2005) to the EMBL/GenBank/DDBJ databases.
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NUCLEOTIDE SEQUENCE.
NUCLEOTIDE SEQUENCE.
STRAIN=D4.CRA.1993;
PubMed=16282468; DOI=10.1128/JVI.79.23.14680-14687.2005;
Carxington C.V., Foster J.B., Pybus O.G., Bennett S.N., Holmes E.C.;
"Invasion and maintenance of dengue virus type 2 and type 4 in the americas.";
                                                                              QZYED3. DEN4 PRELIMINARY; PRT; 646 AA.
Q2YED3;
20-DEC-2005, integrated into UniProtKB/TrEMBL.
20-DEC-2006, entry version 1.
07-FEB-2006, entry version 3.
Polyprotein (Fragment).
Dengue virus type 4.
Viruses; ssRNA positive-strand viruses, no DNA stage; Flaviviridae; Flavivirus; Dengue virus group.
NIBI_TAXID=11070;
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70683 MW; E4A170ED7C6BC815 CRC64;
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